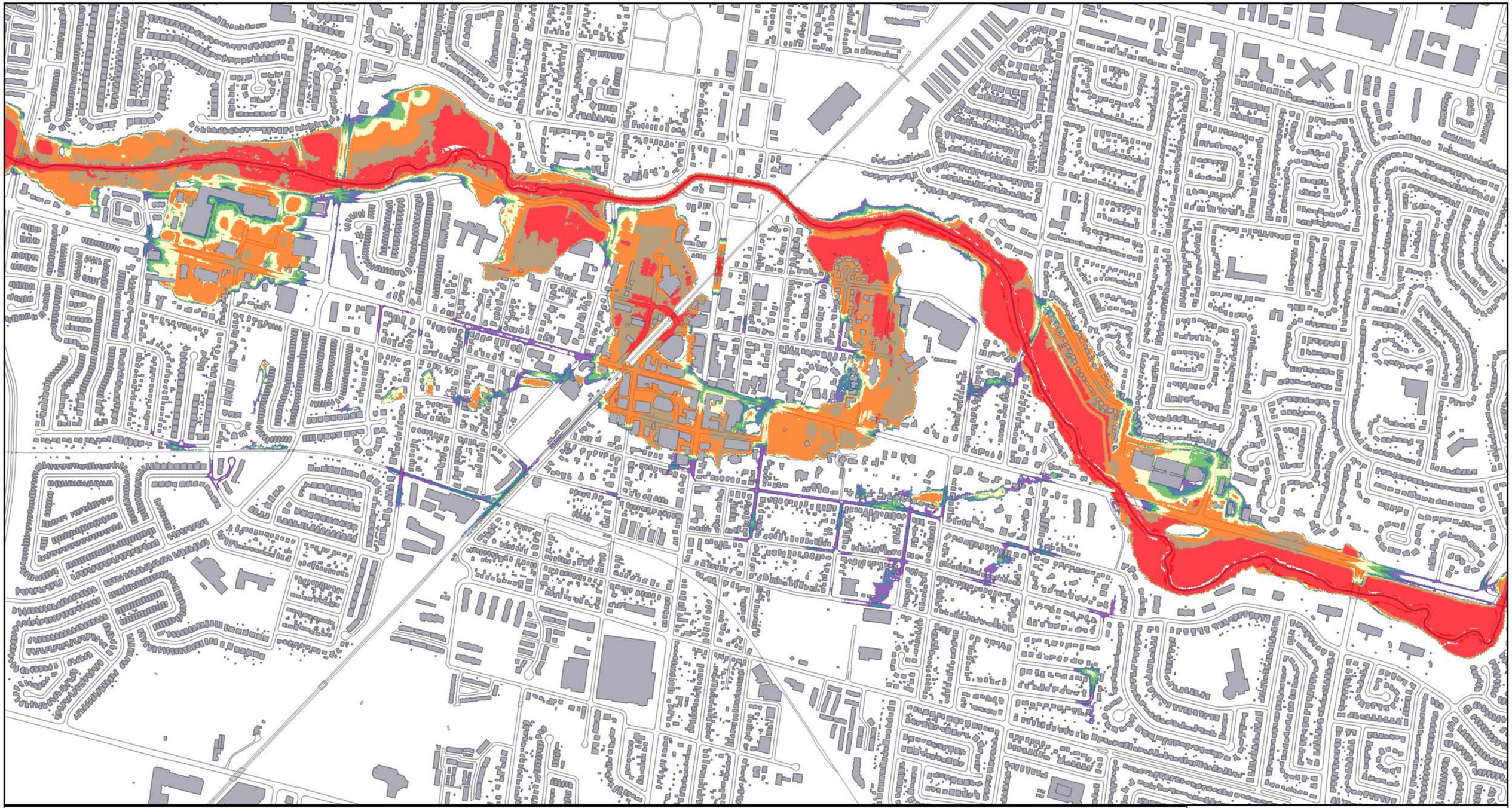

Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

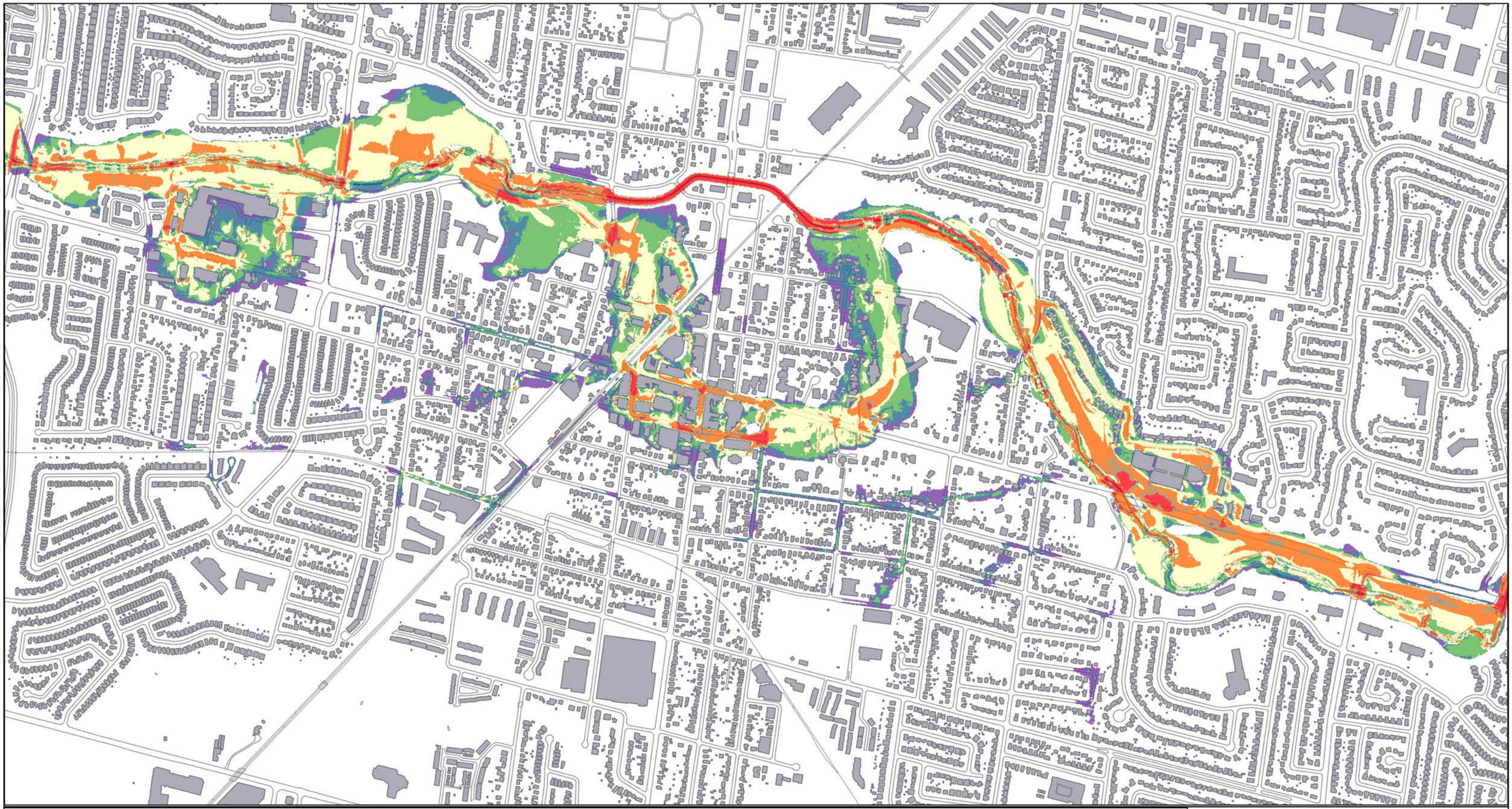
Project #22062

Regional Storm - Steady State
Depth

K. Molnar
K. Hofbauer

Map 1.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

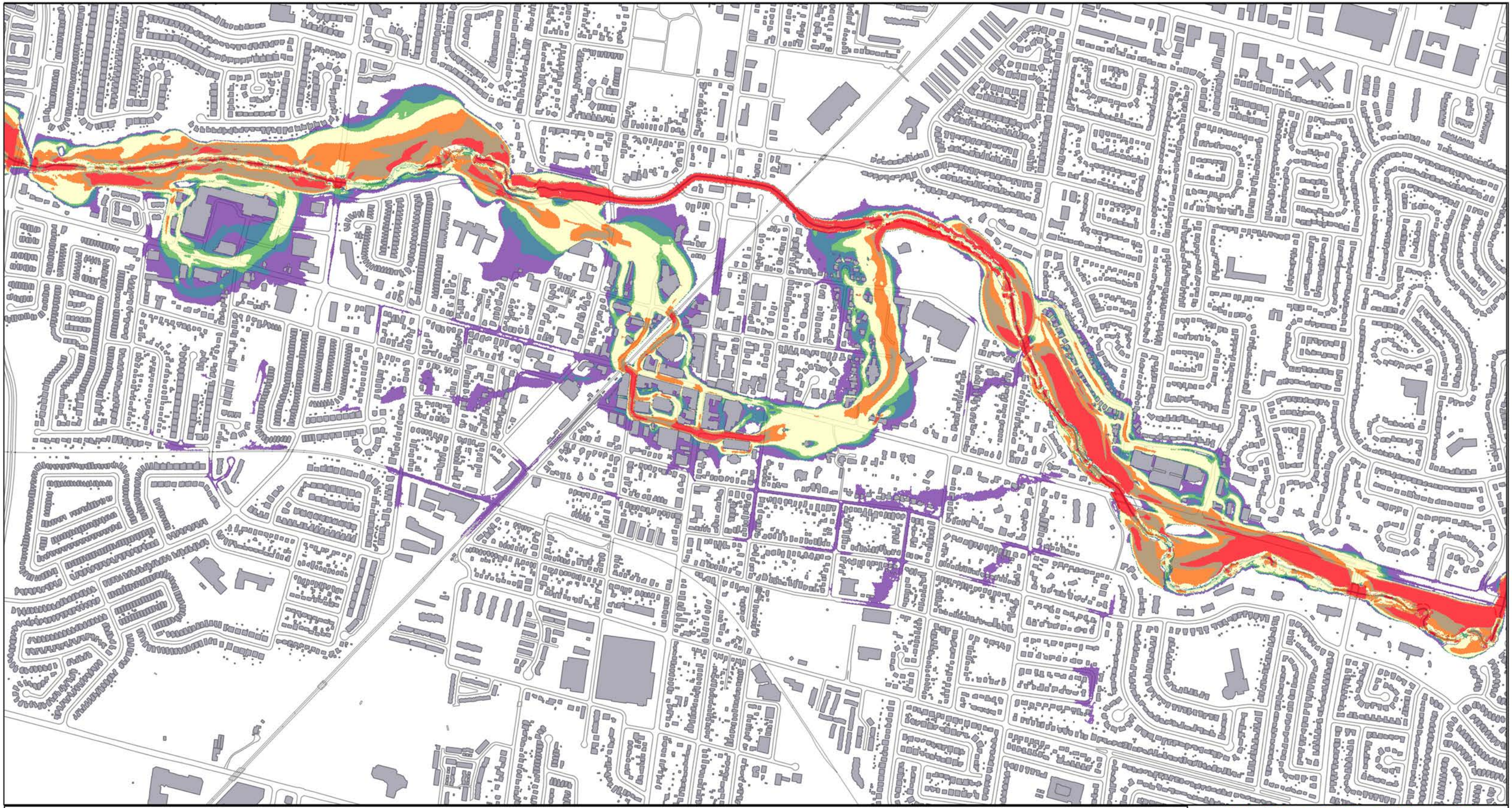
Project #22062

Regional Storm - Steady State
Velocity

K. Molnar
K. Hofbauer

Map 1.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

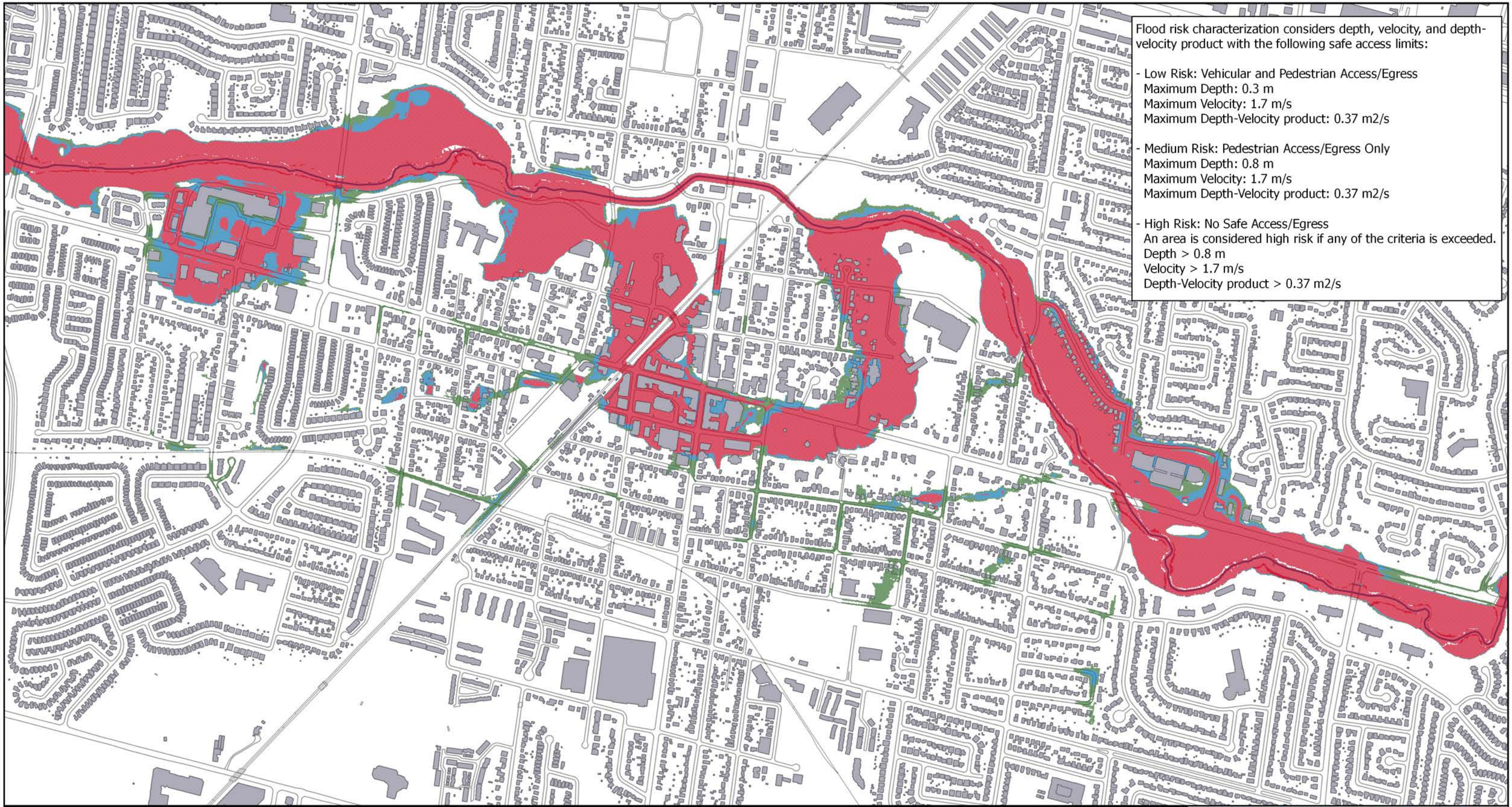
Project #22062

Regional Storm - Steady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 1.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

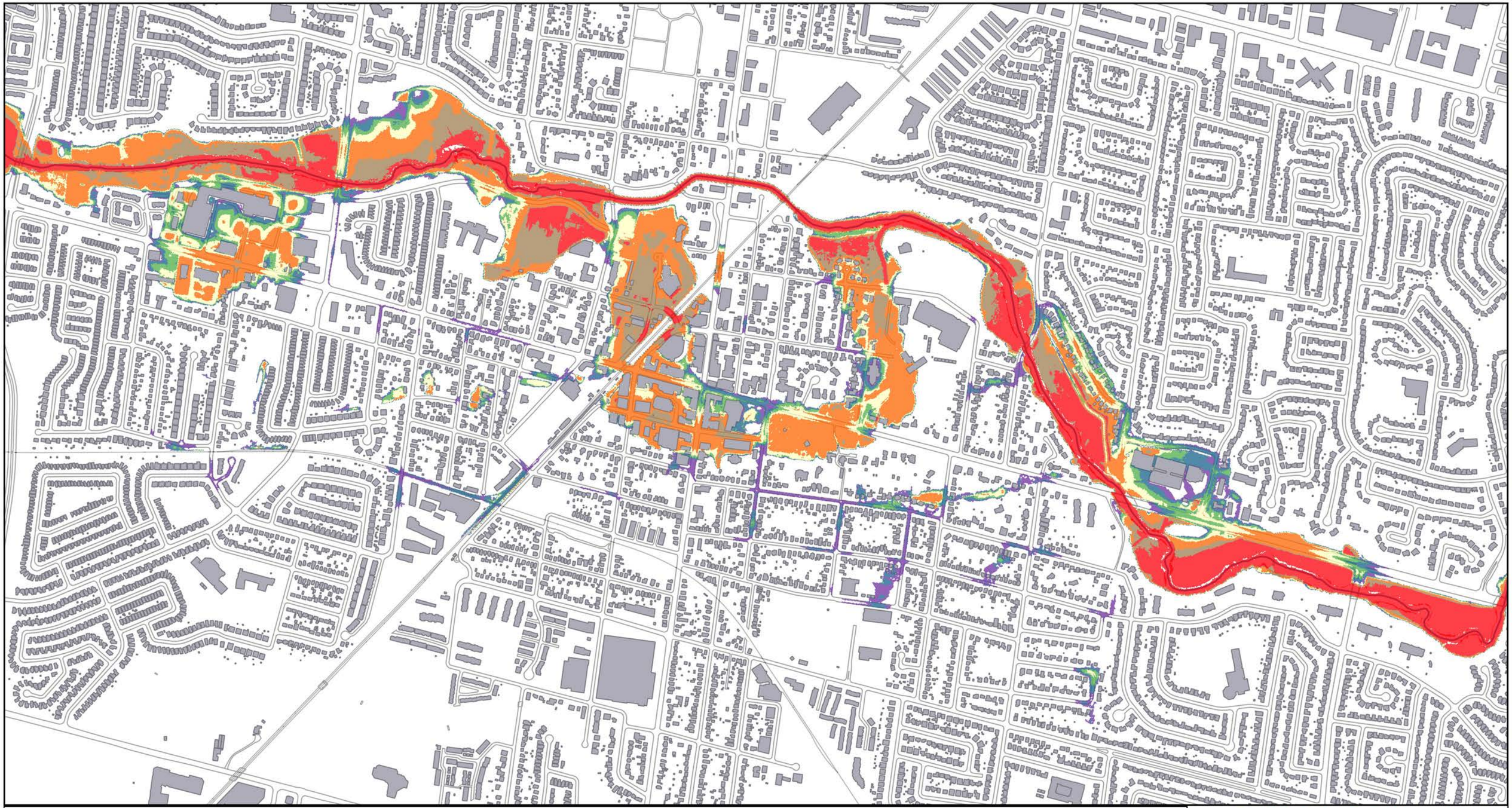
Project #22062

Regional Storm - Steady State
Flood Risk

K. Molnar
K. Hofbauer

Map 1.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: June 29, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

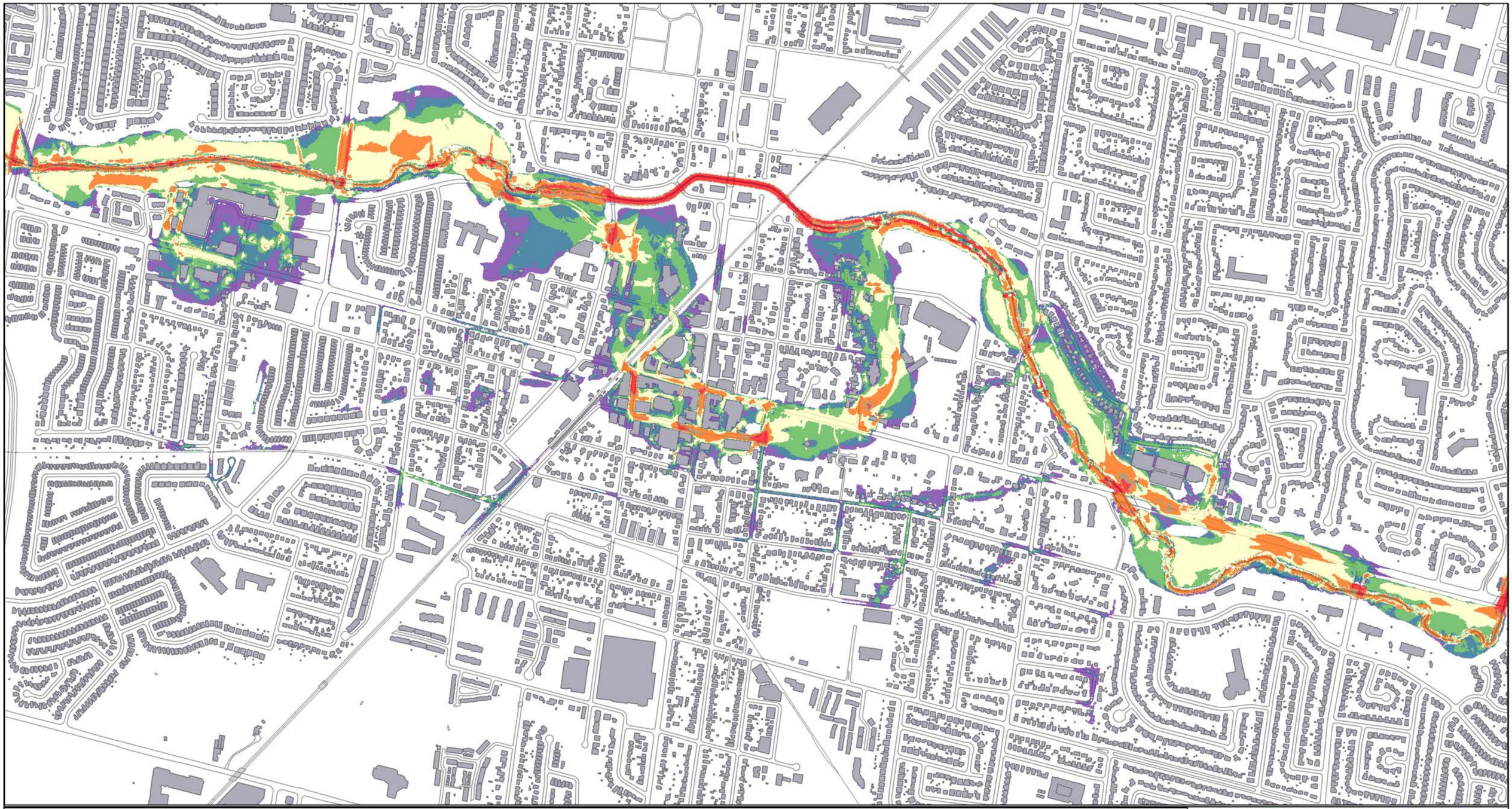
Project #22062

Regional Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 2.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: June 29, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

Project #22062

Regional Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 2.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs

Run Date: June 29, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

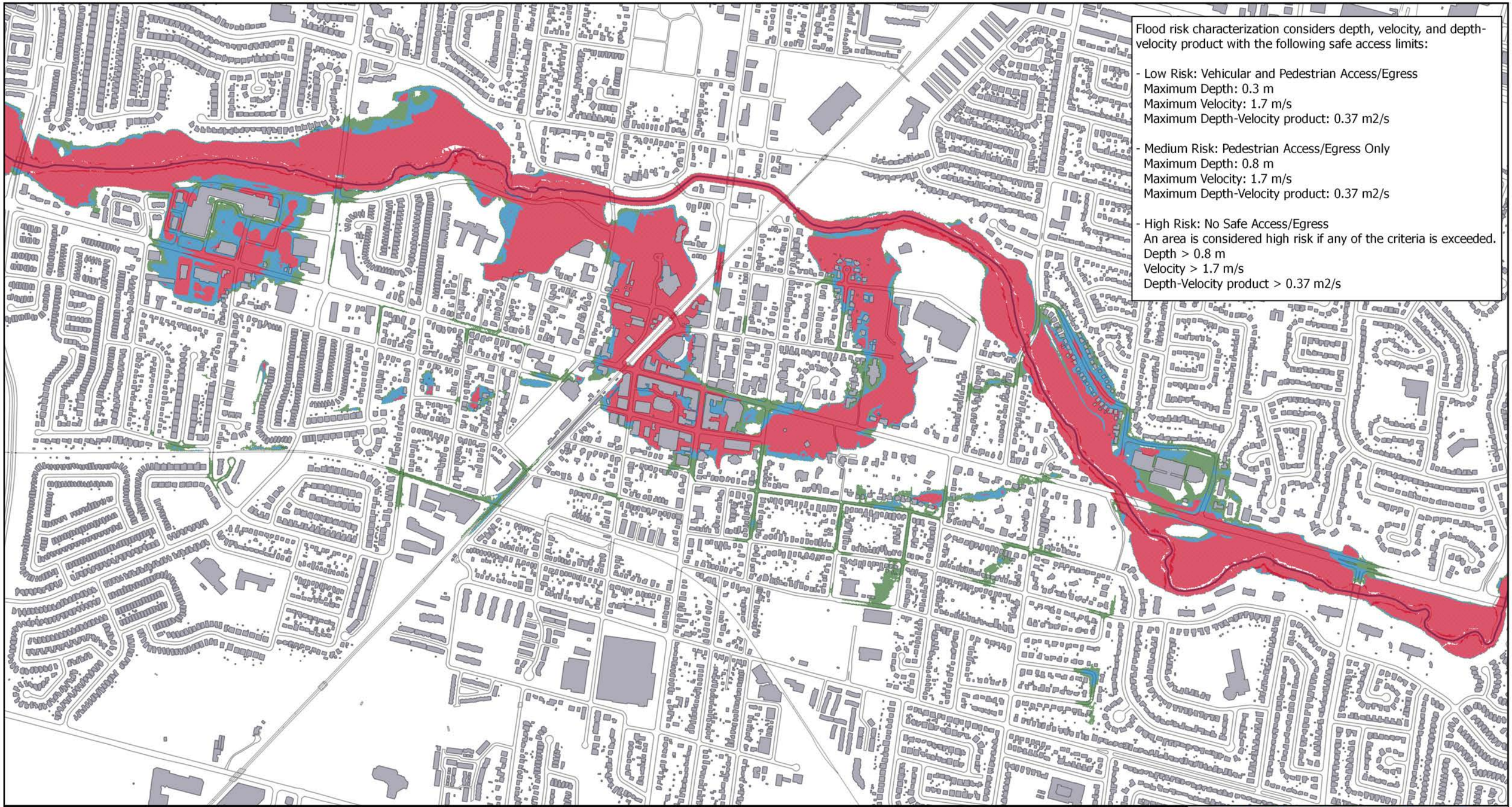
Project #22062

Regional Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 2.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: June 29, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

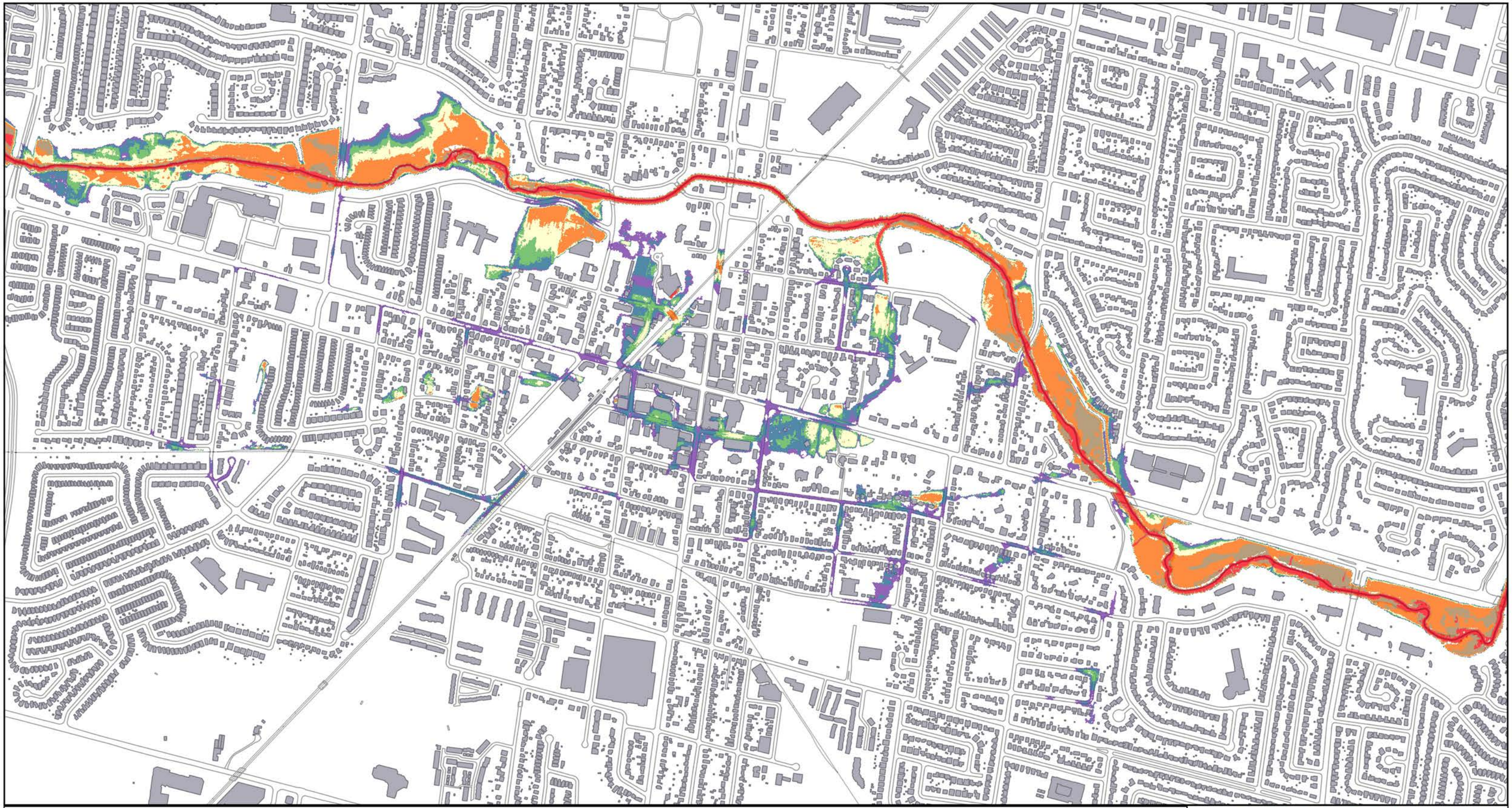
Project #22062

Regional Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 2.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

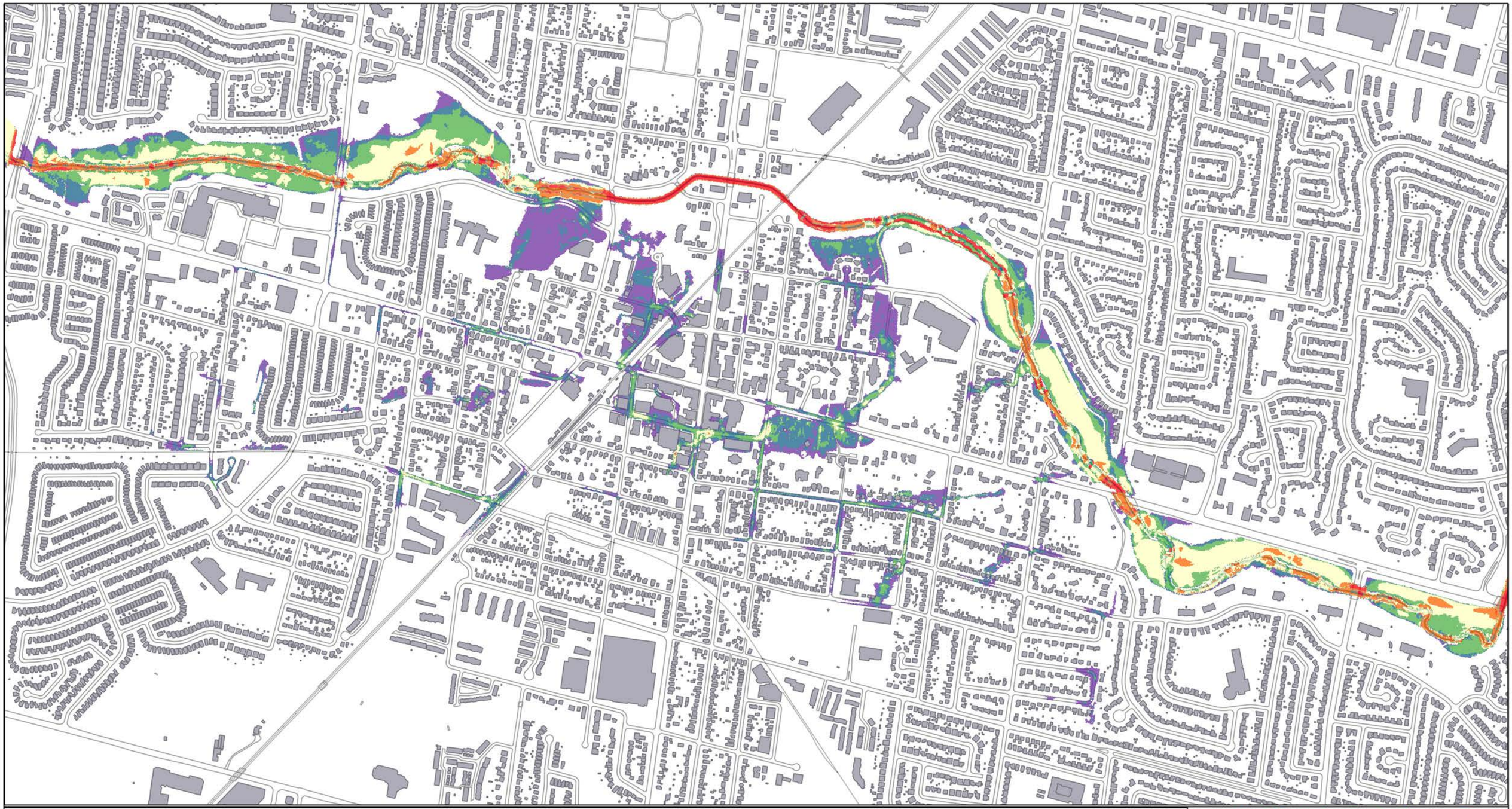
Project #22062

350 Year Storm - Steady State
Depth

K. Molnar
K. Hofbauer

Map 3.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

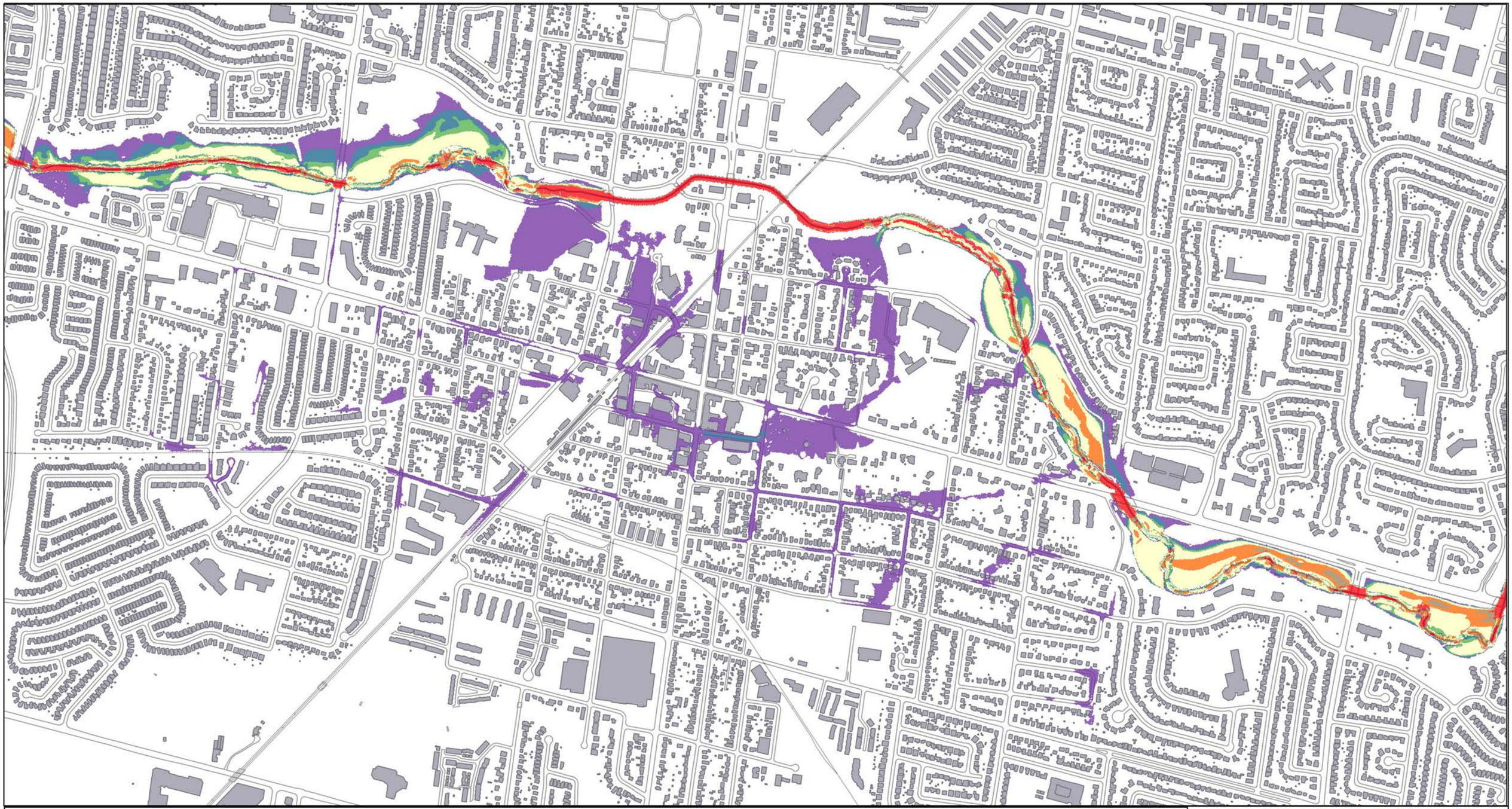
Project #22062

350 Year Storm - Steady State
Velocity

K. Molnar
K. Hofbauer

Map 3.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

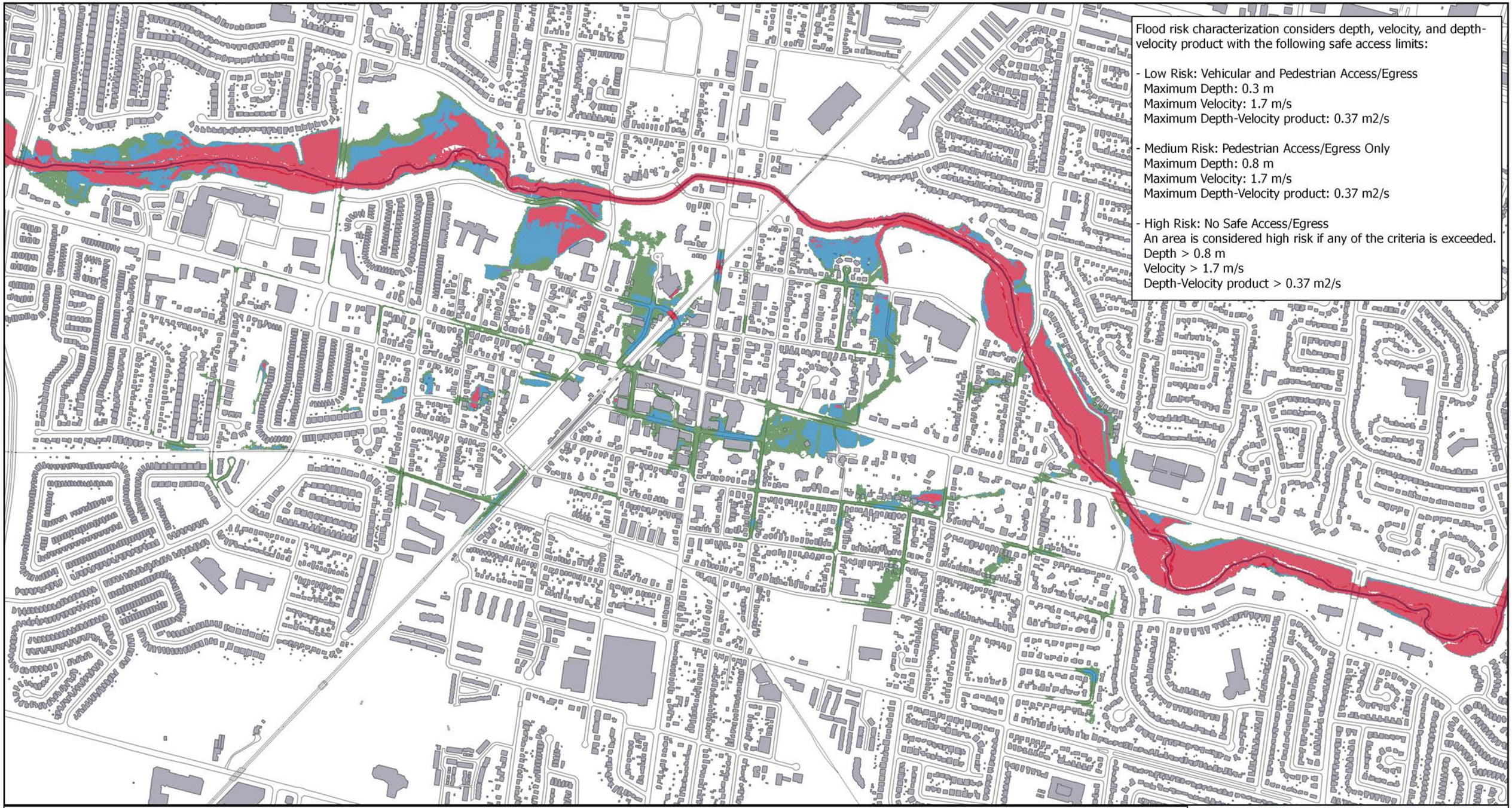
Project #22062

350 Year Storm - Steady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 3.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

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  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

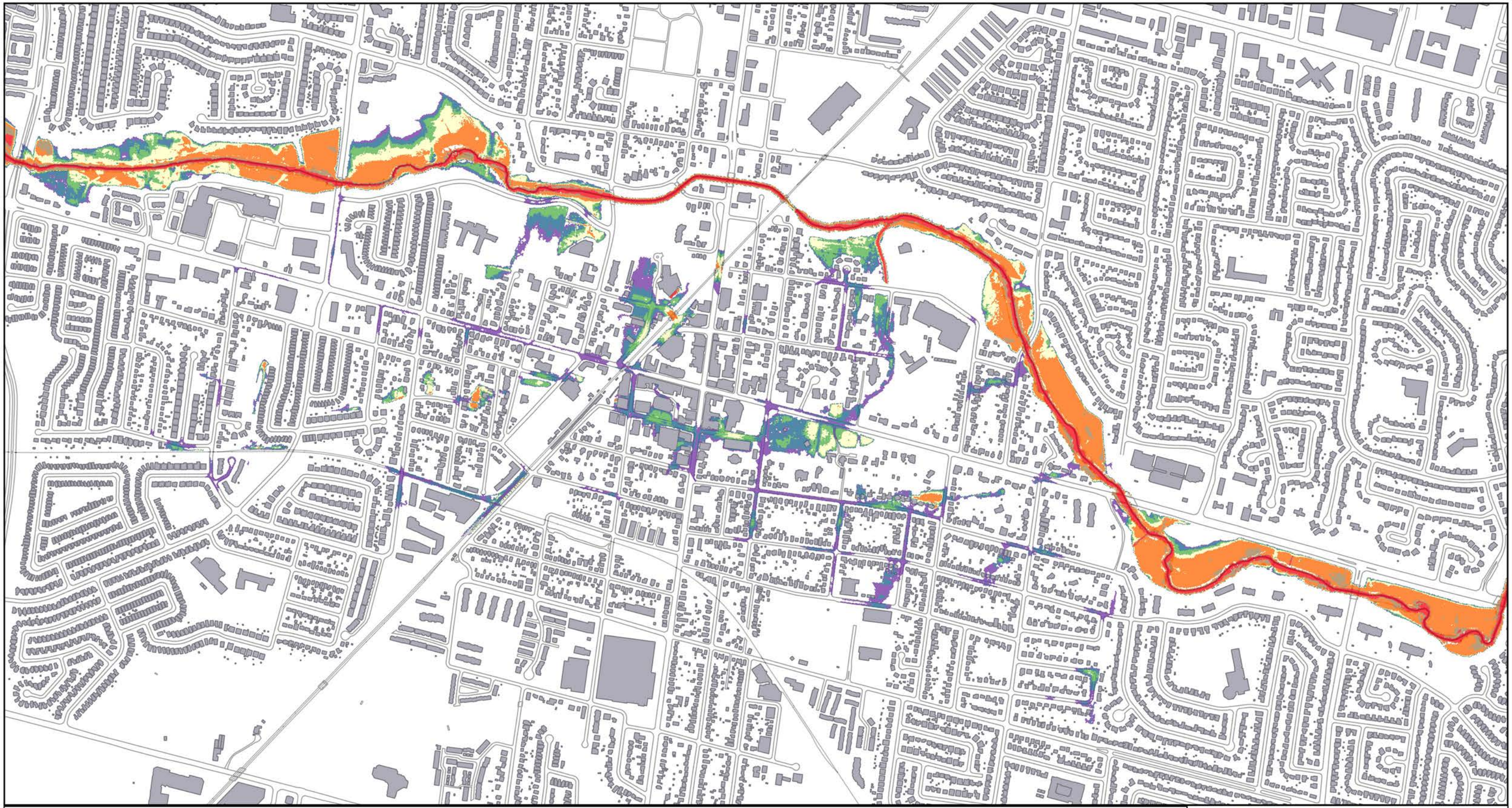
Project #22062

350 Year Storm - Steady State
Flood Risk

K. Molnar
K. Hofbauer

Map 3.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

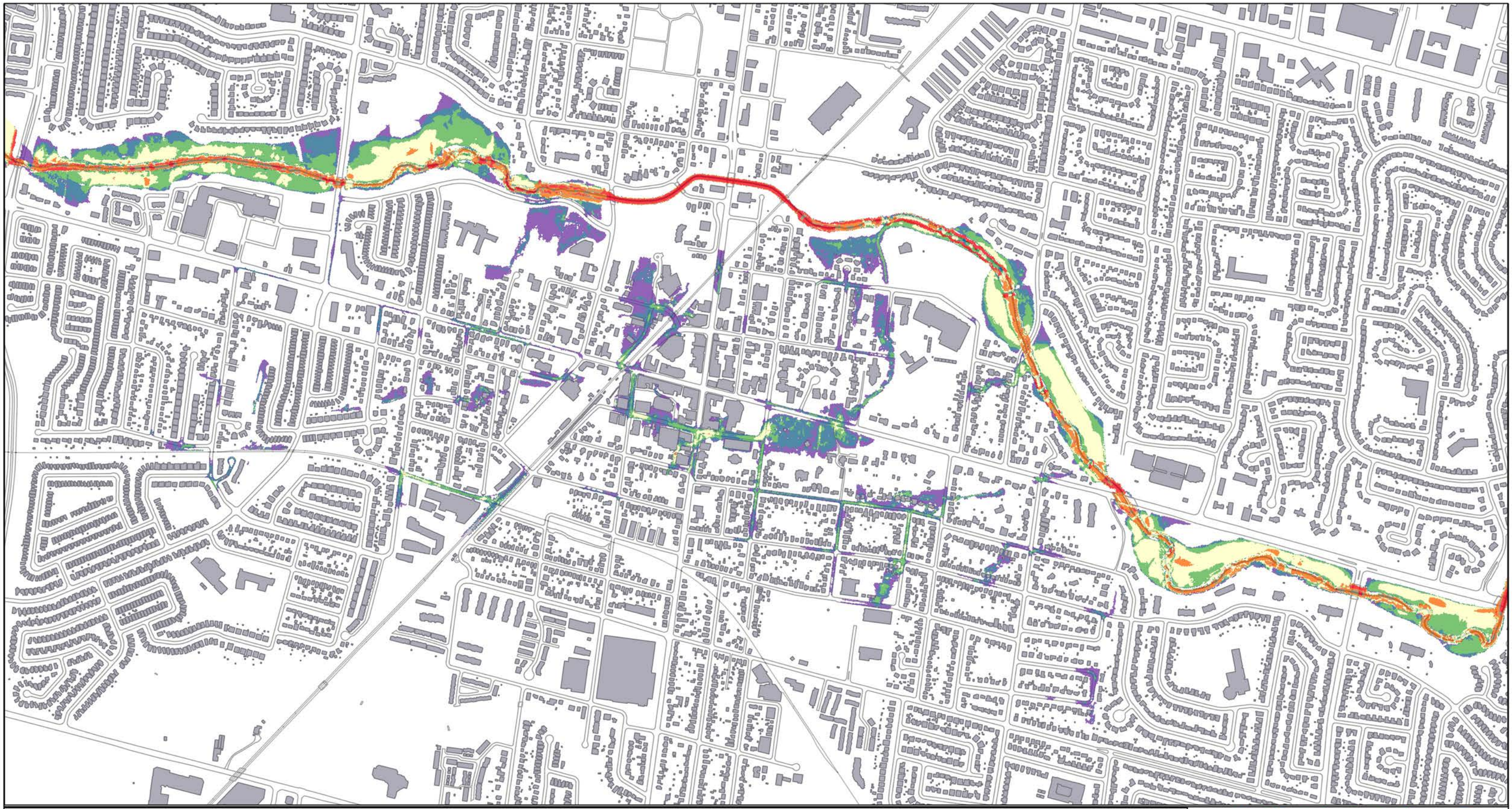
Project #22062

350 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 4.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

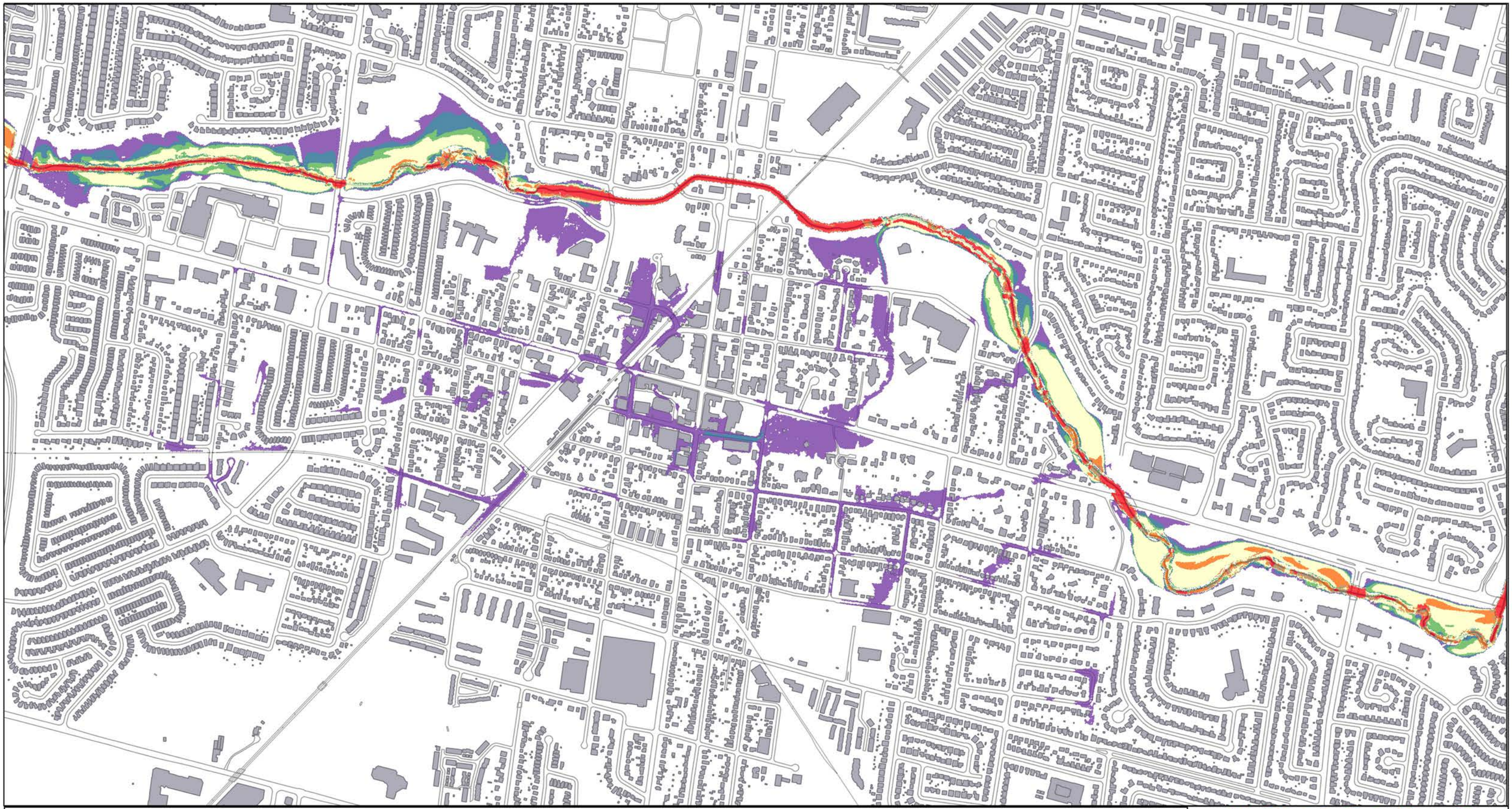
Project #22062

350 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 4.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

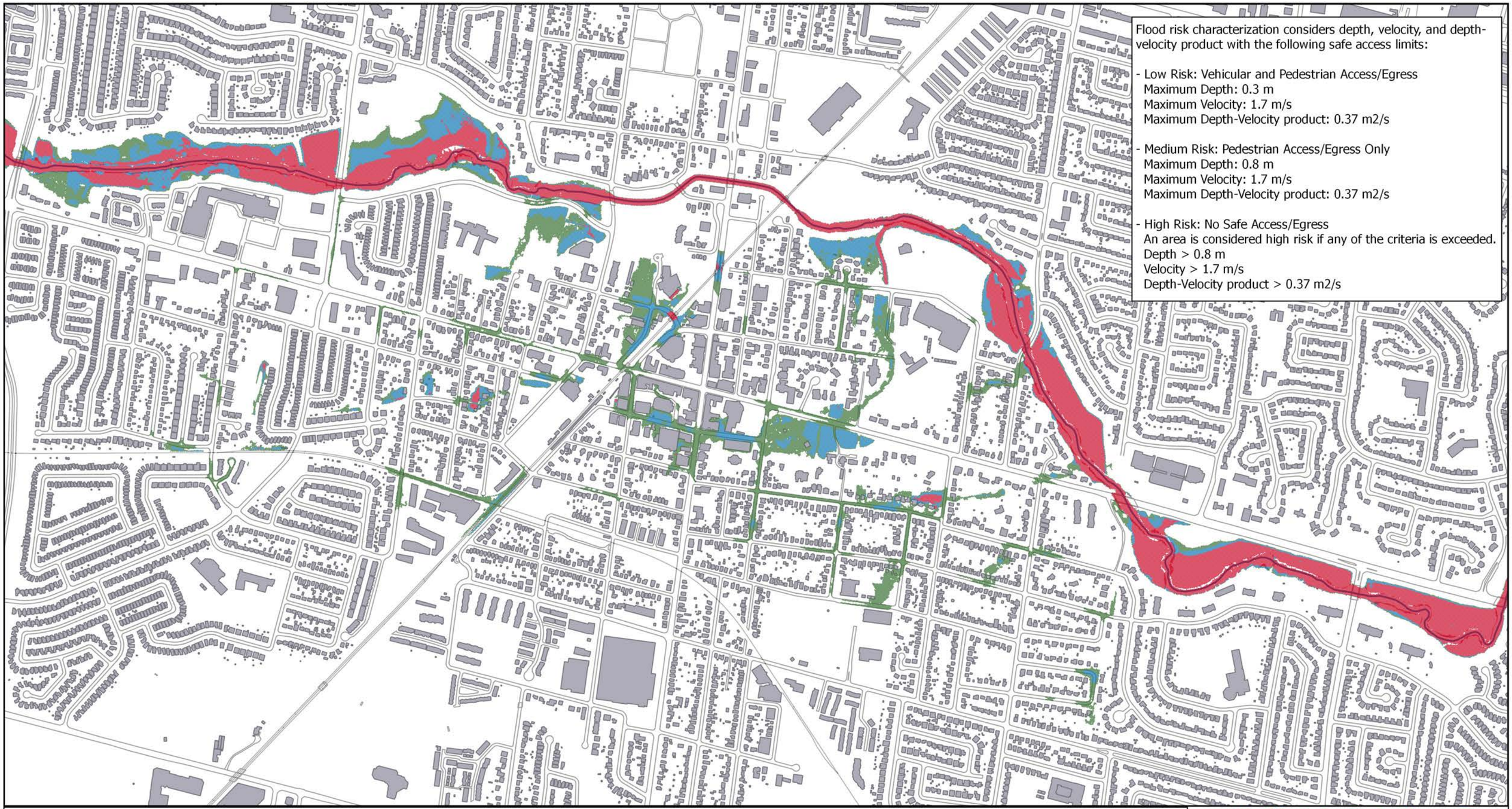
Project #22062

350 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 4.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

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  Maximum Depth: 0.3 m
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  Maximum Depth-Velocity product: 0.37 m2/s

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  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

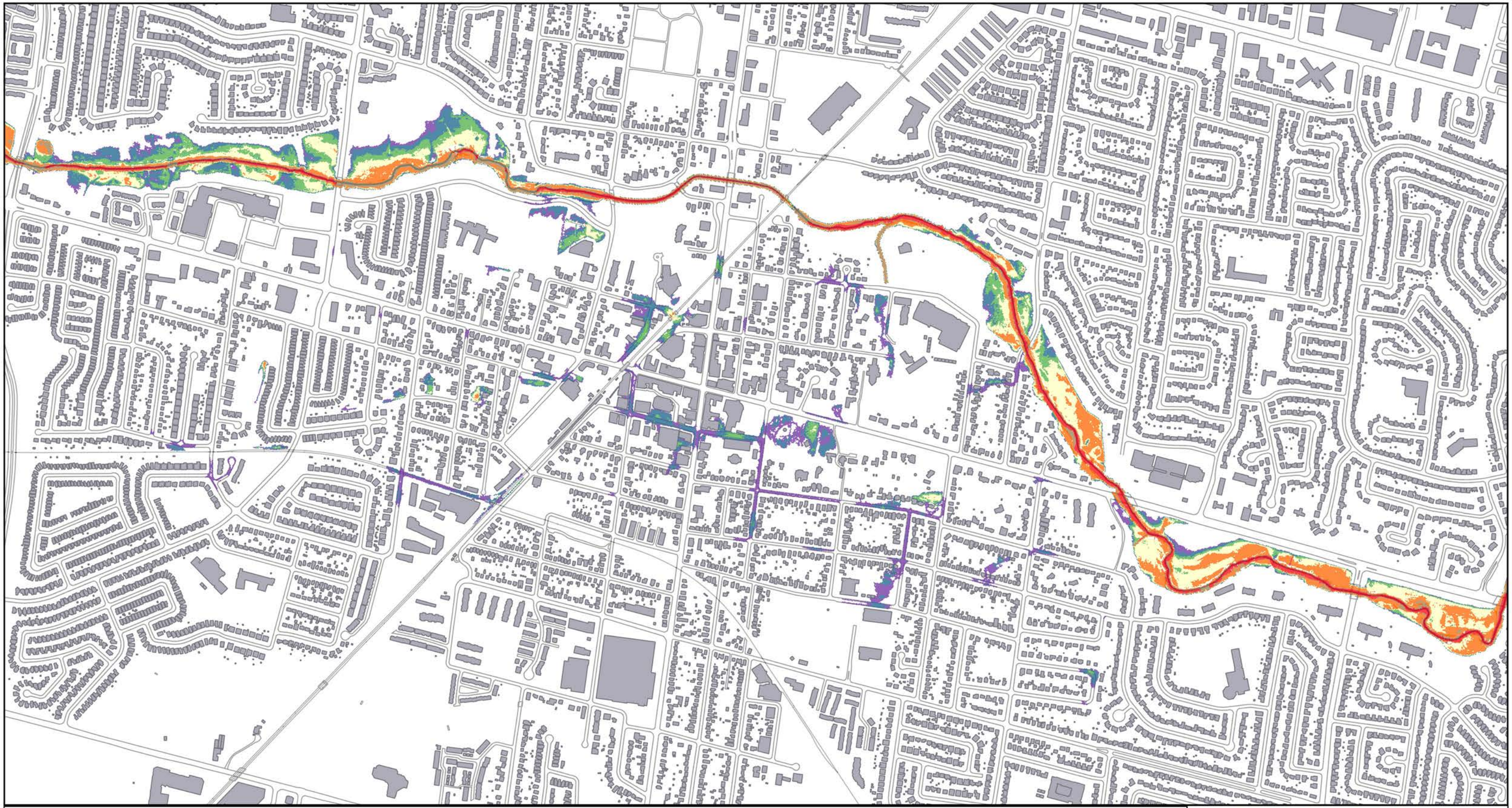
Project #22062

350 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 4.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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MIKE FLOOD Results

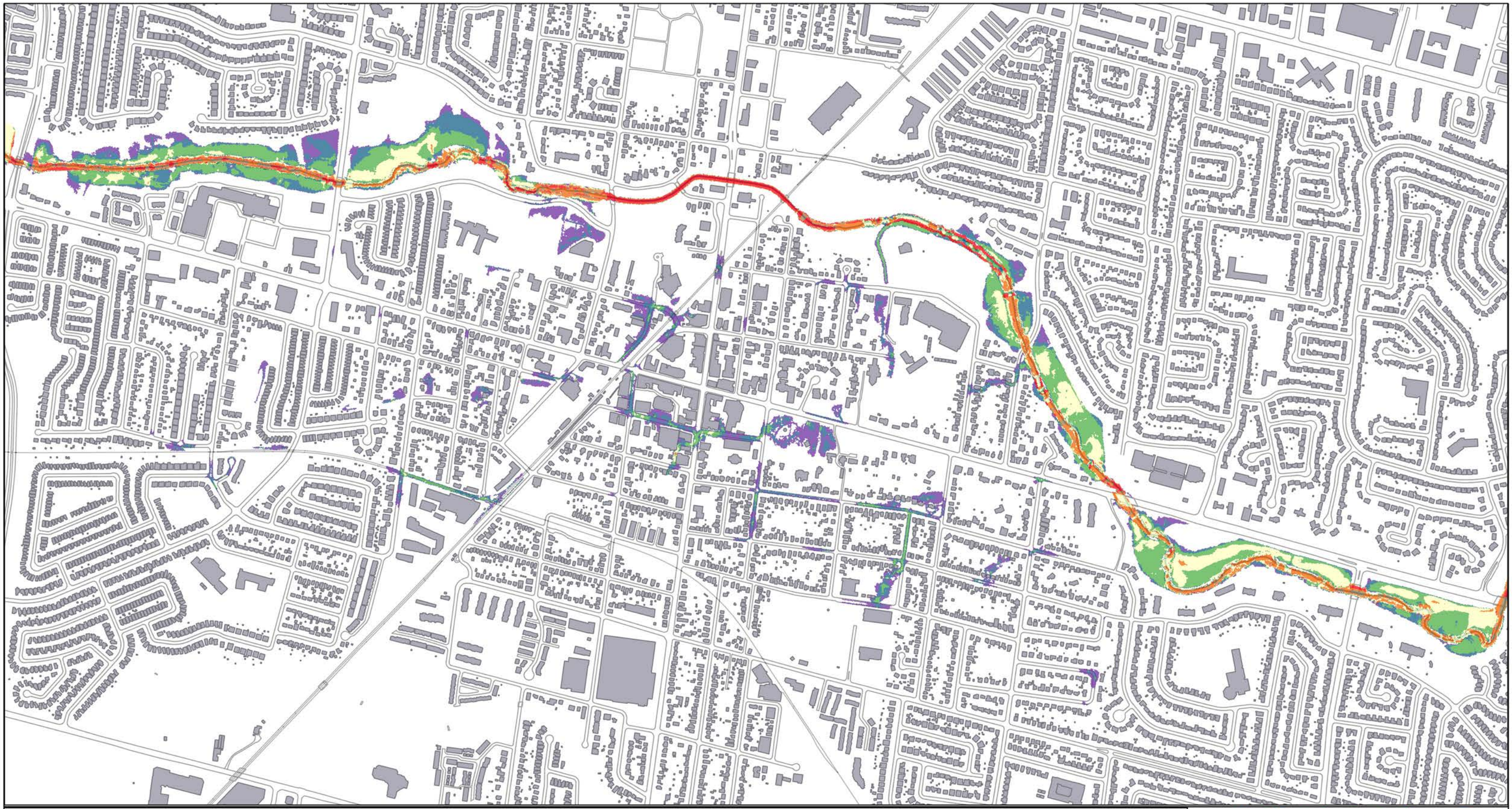
Project #22062

100 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 5.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

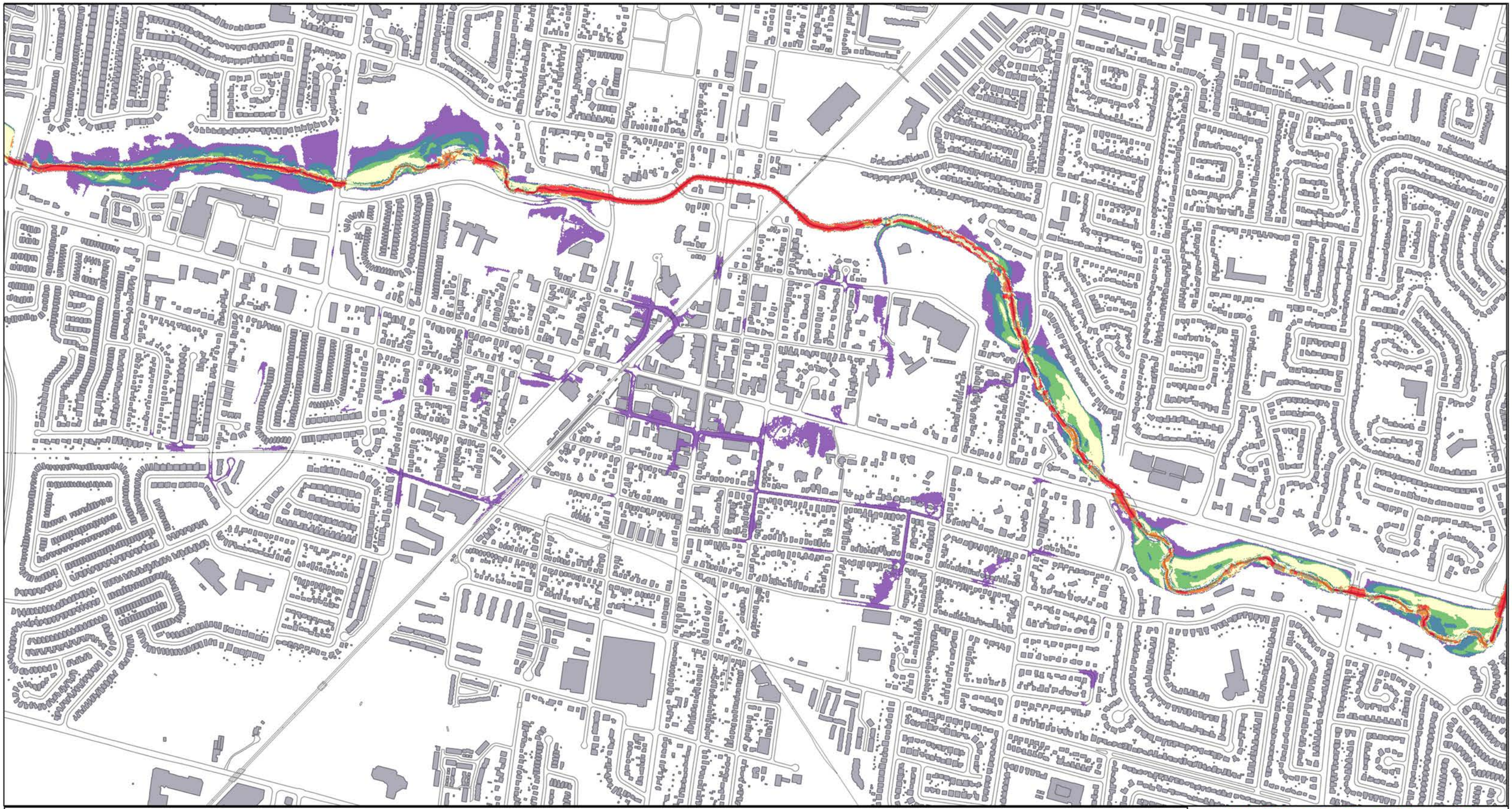
Project #22062

100 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 5.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 18, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

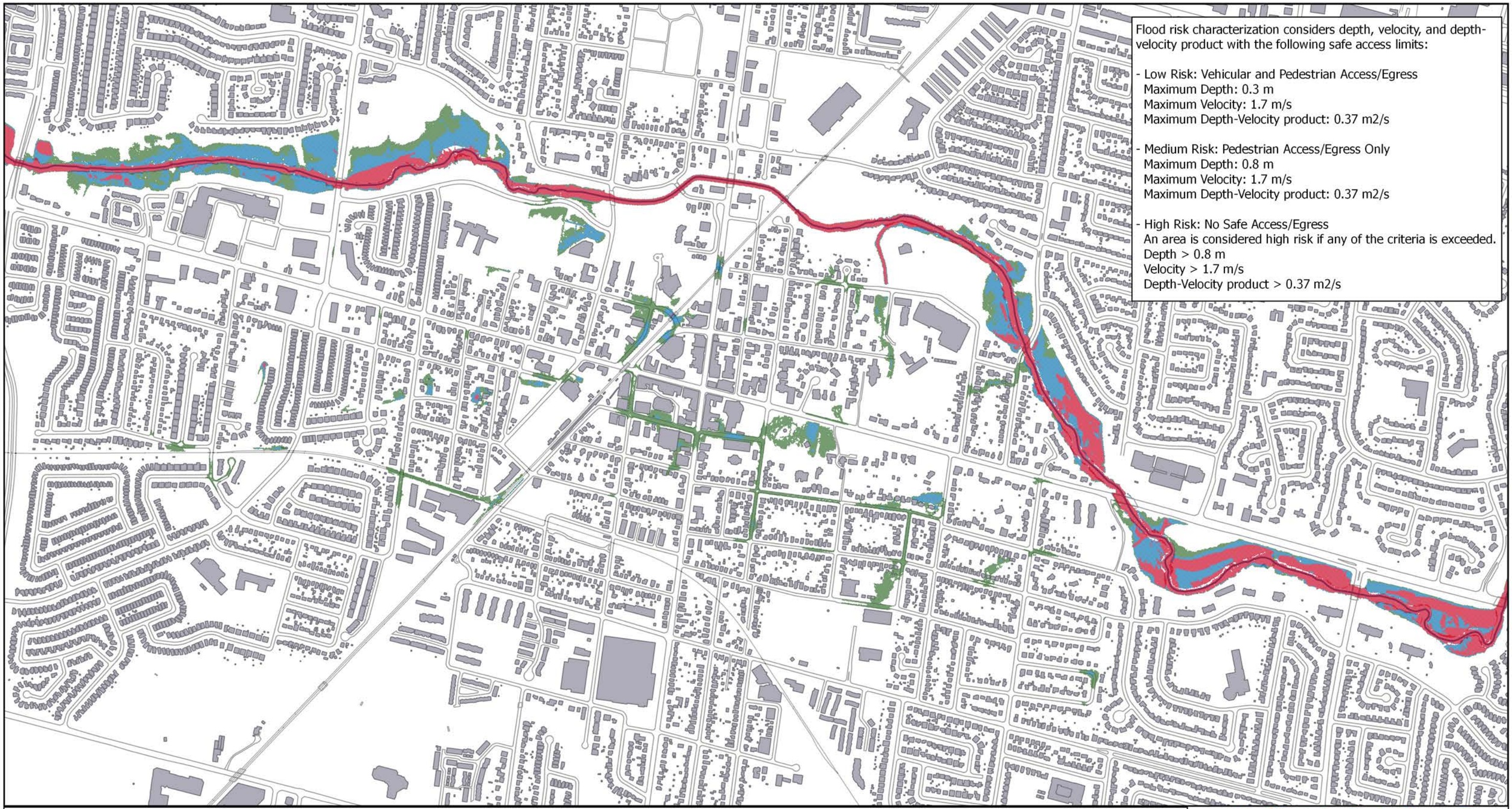
Project #22062

100 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 5.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



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  Maximum Depth-Velocity product: 0.37 m2/s

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  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 18, 2017
Figure Date: August 17, 201

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

Project #22062

100 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 5.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs

Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

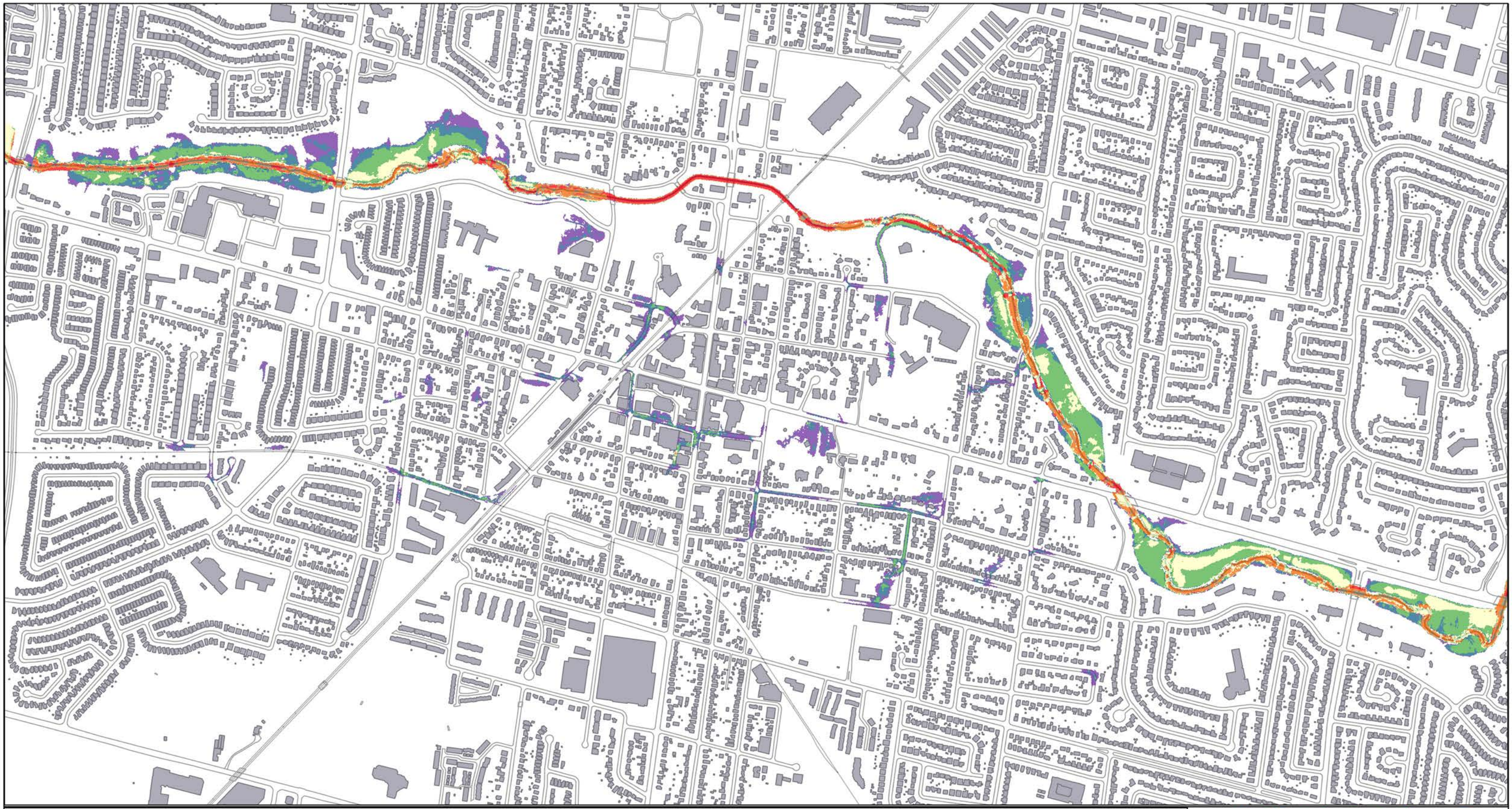
Project #22062

50 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 6.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

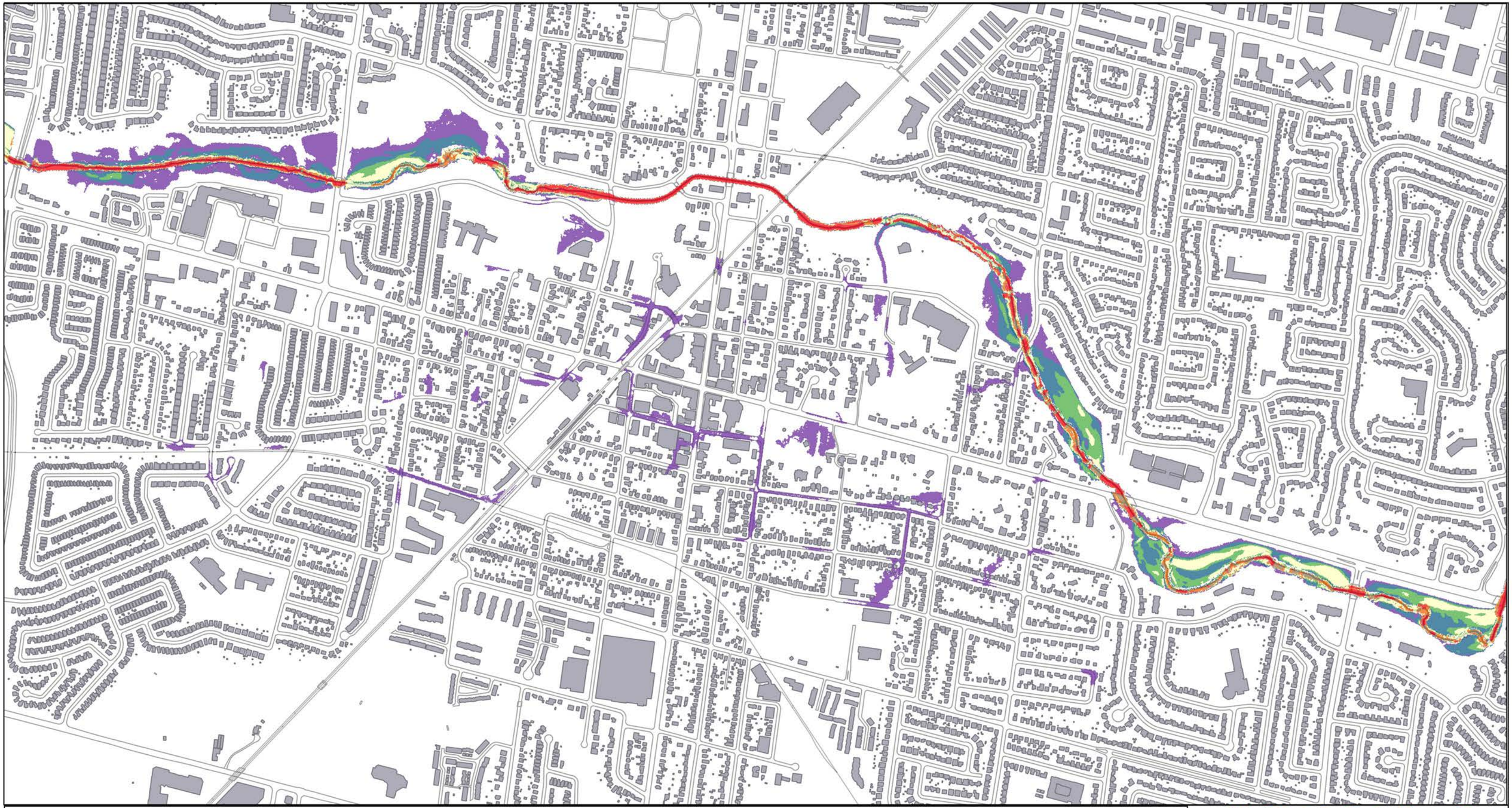
Project #22062

50 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 6.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

Matrix Solutions Inc.
ENVIRONMENT & ENGINEERING

Brampton Integrated Flood Study
MIKE FLOOD Results

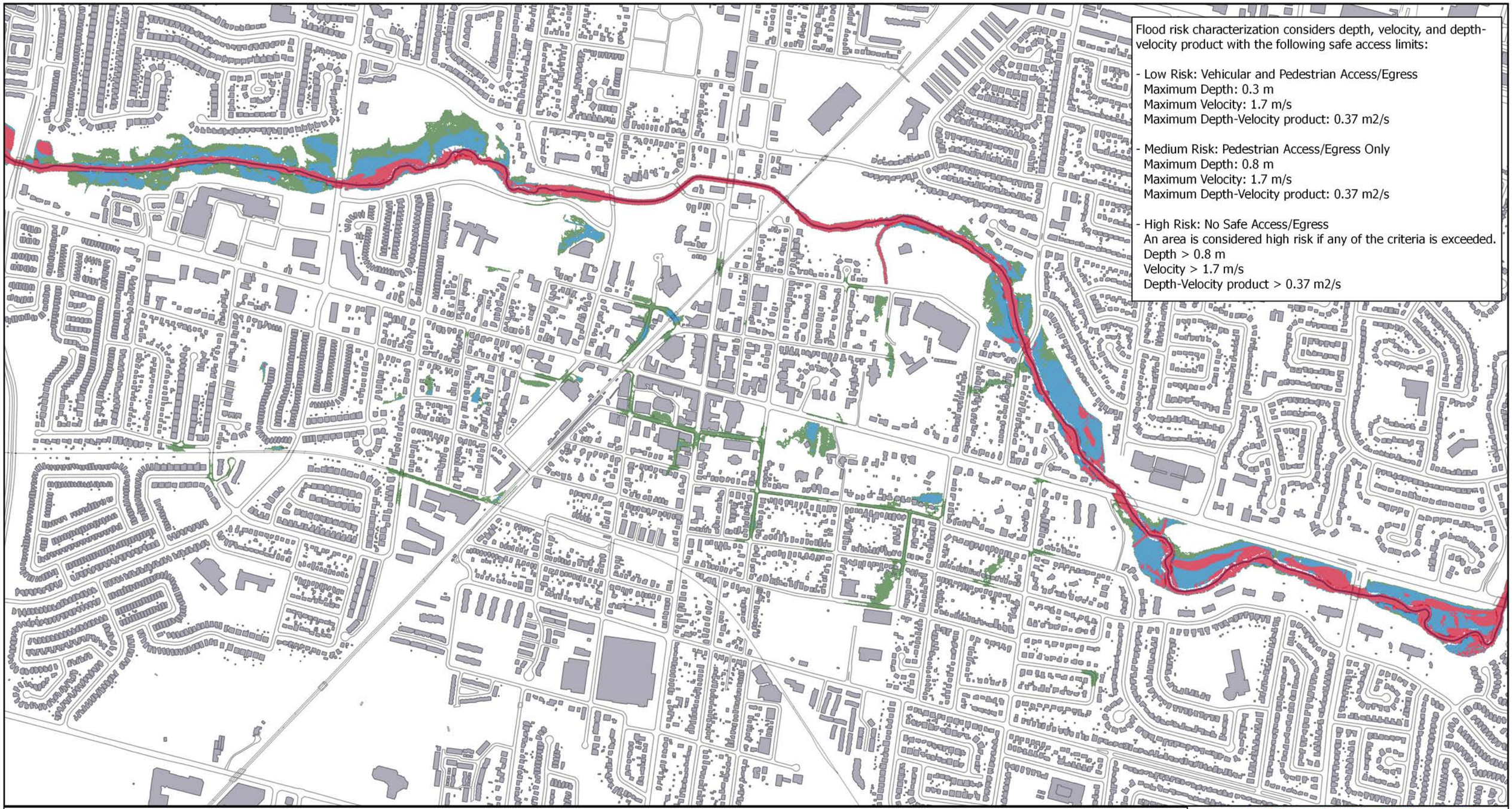
Project #22062

50 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 6.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 21, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

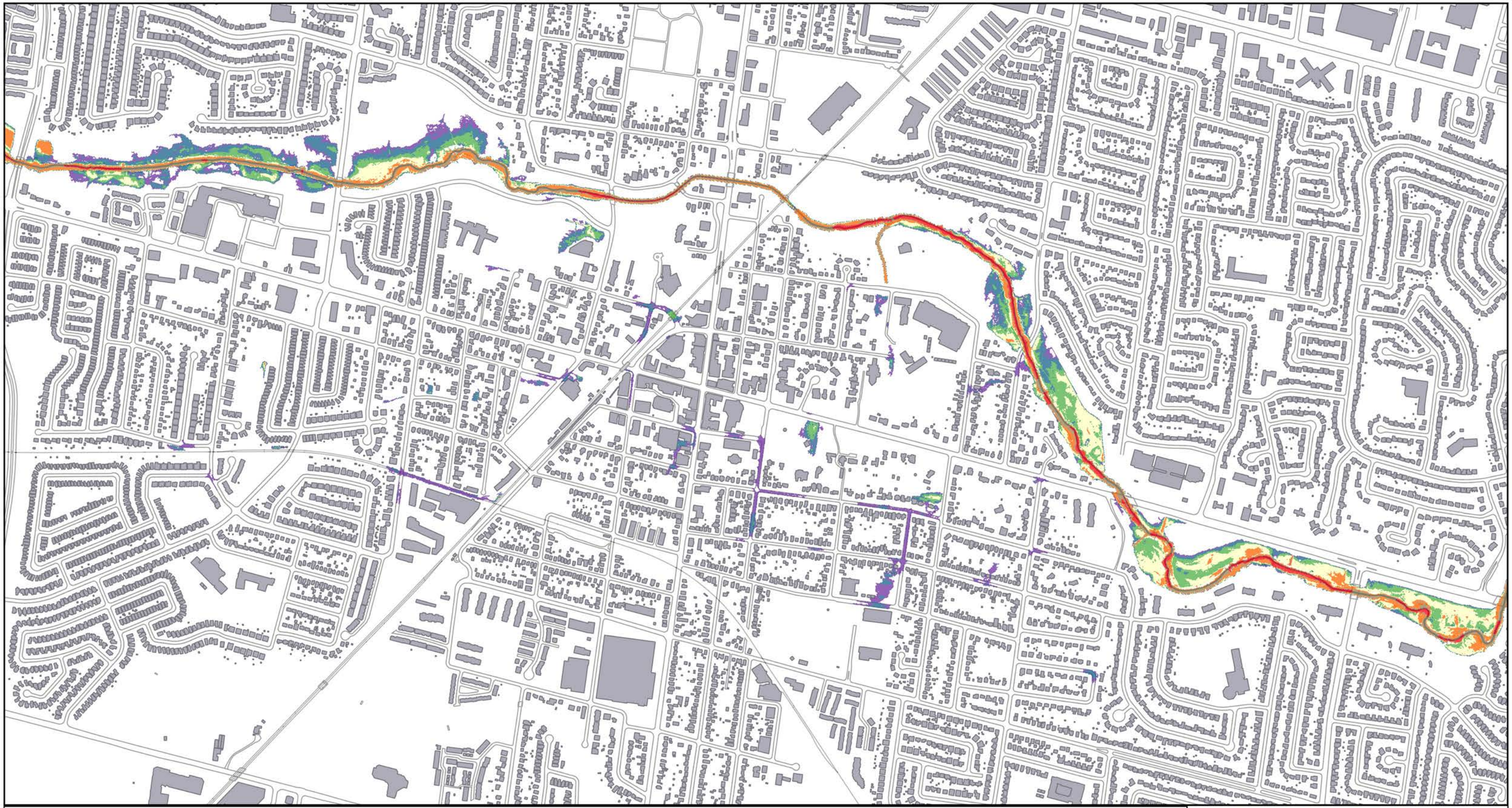
Project #22062

50 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 6.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 24, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

Matrix Solutions Inc.
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Brampton Integrated Flood Study
MIKE FLOOD Results

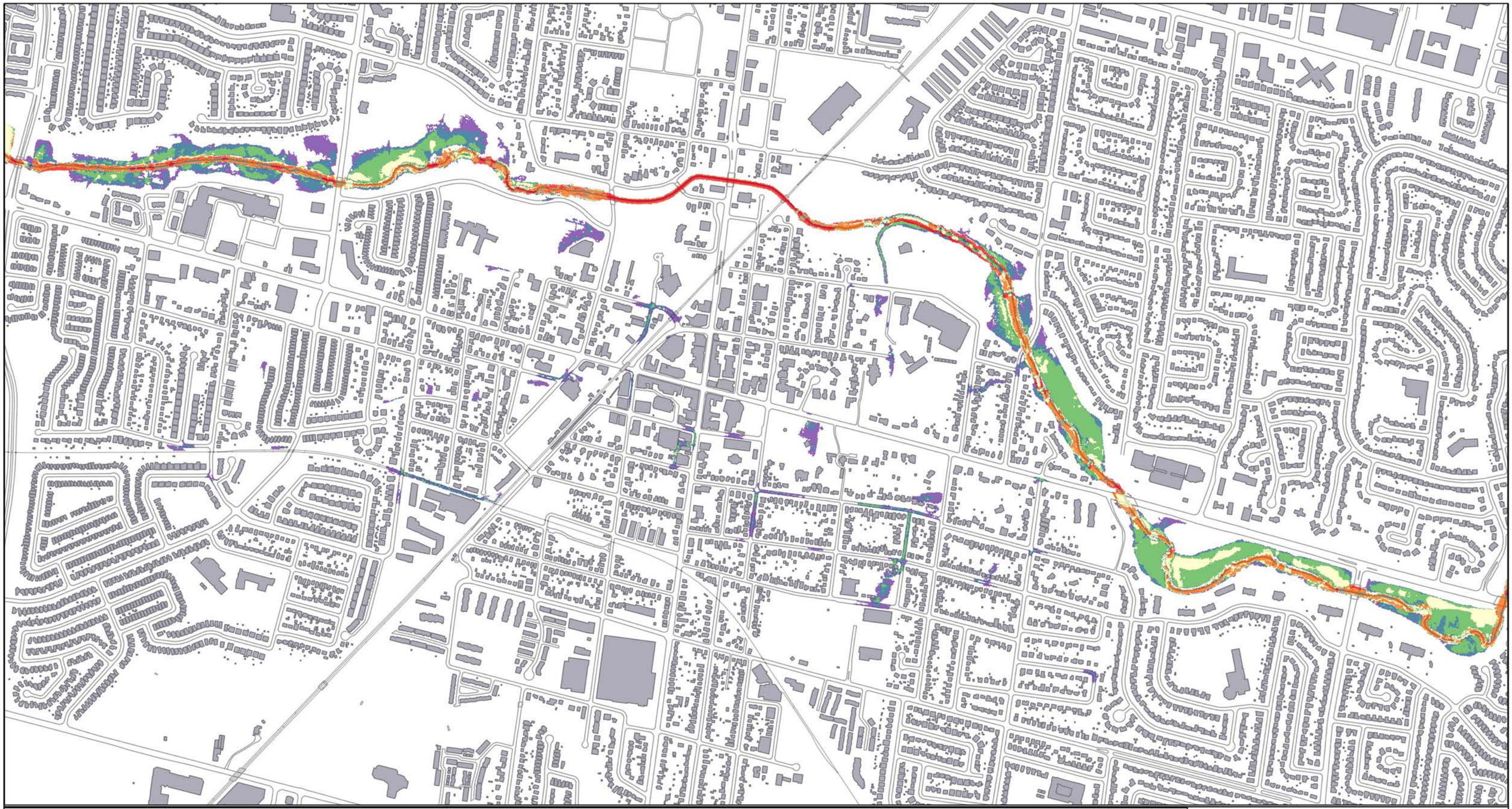
Project #22062

25 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 7.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 24, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

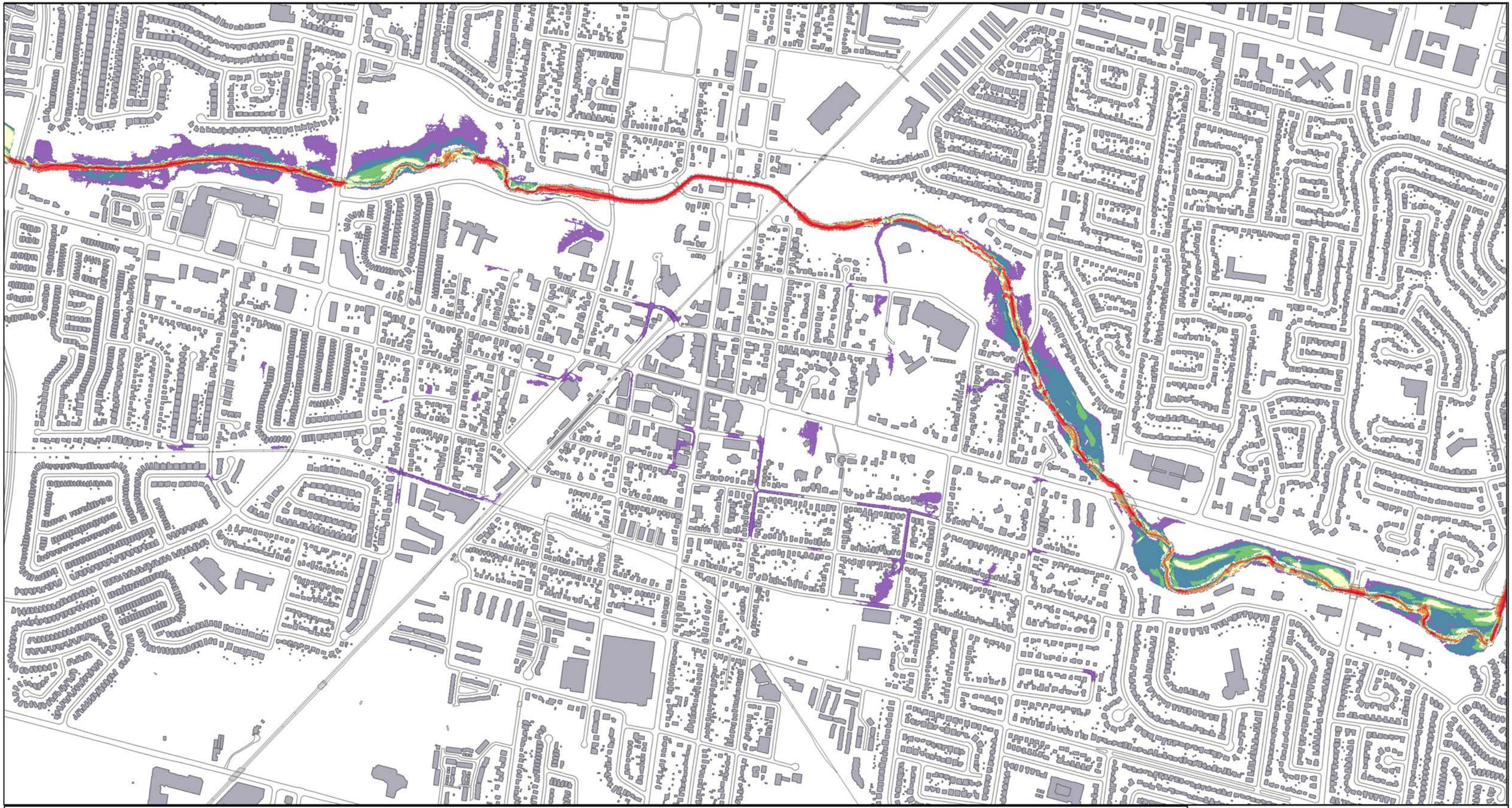
Project #22062

25 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 7.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 24, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

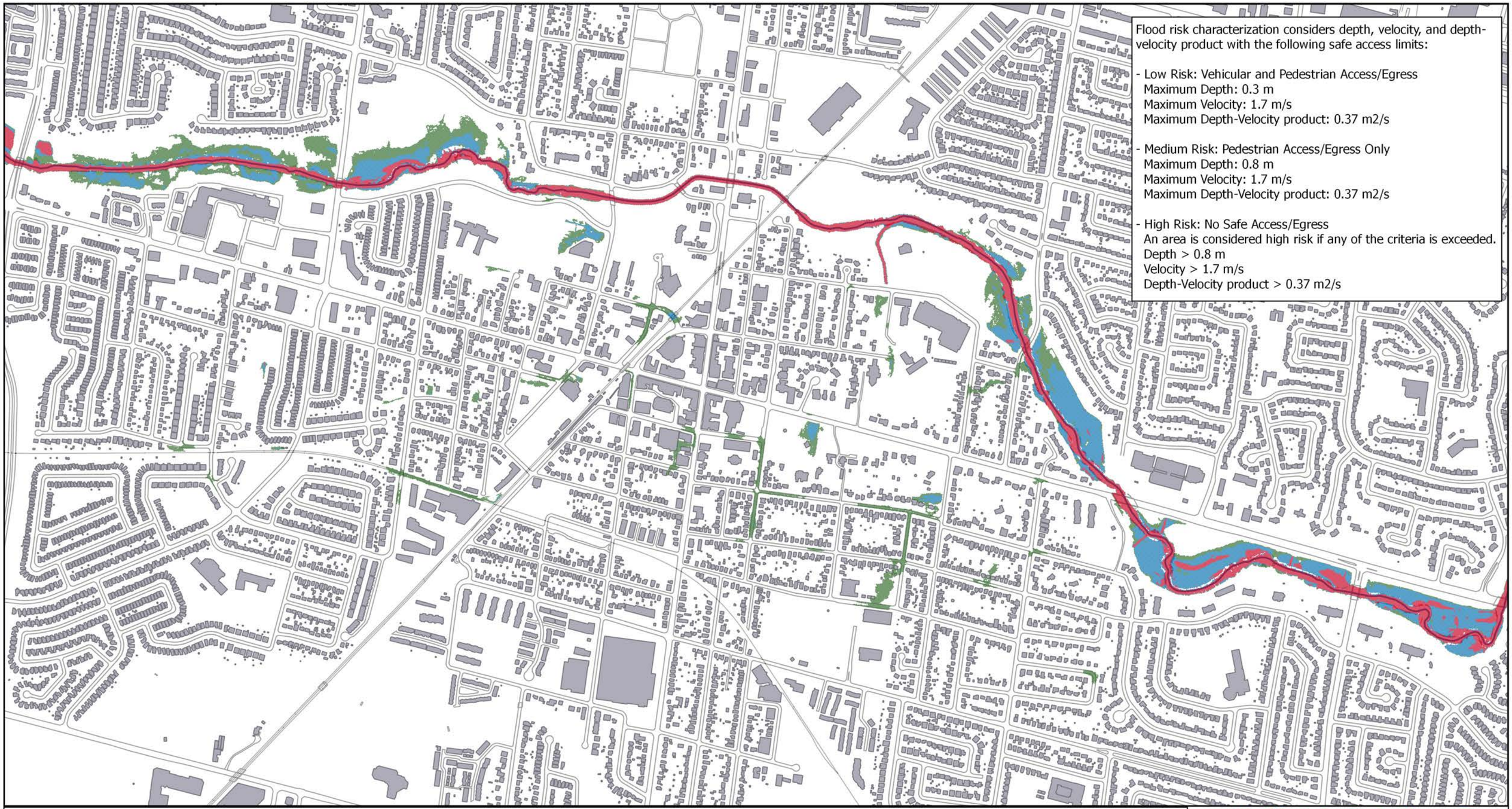
Project #22062

25 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 7.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 24, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

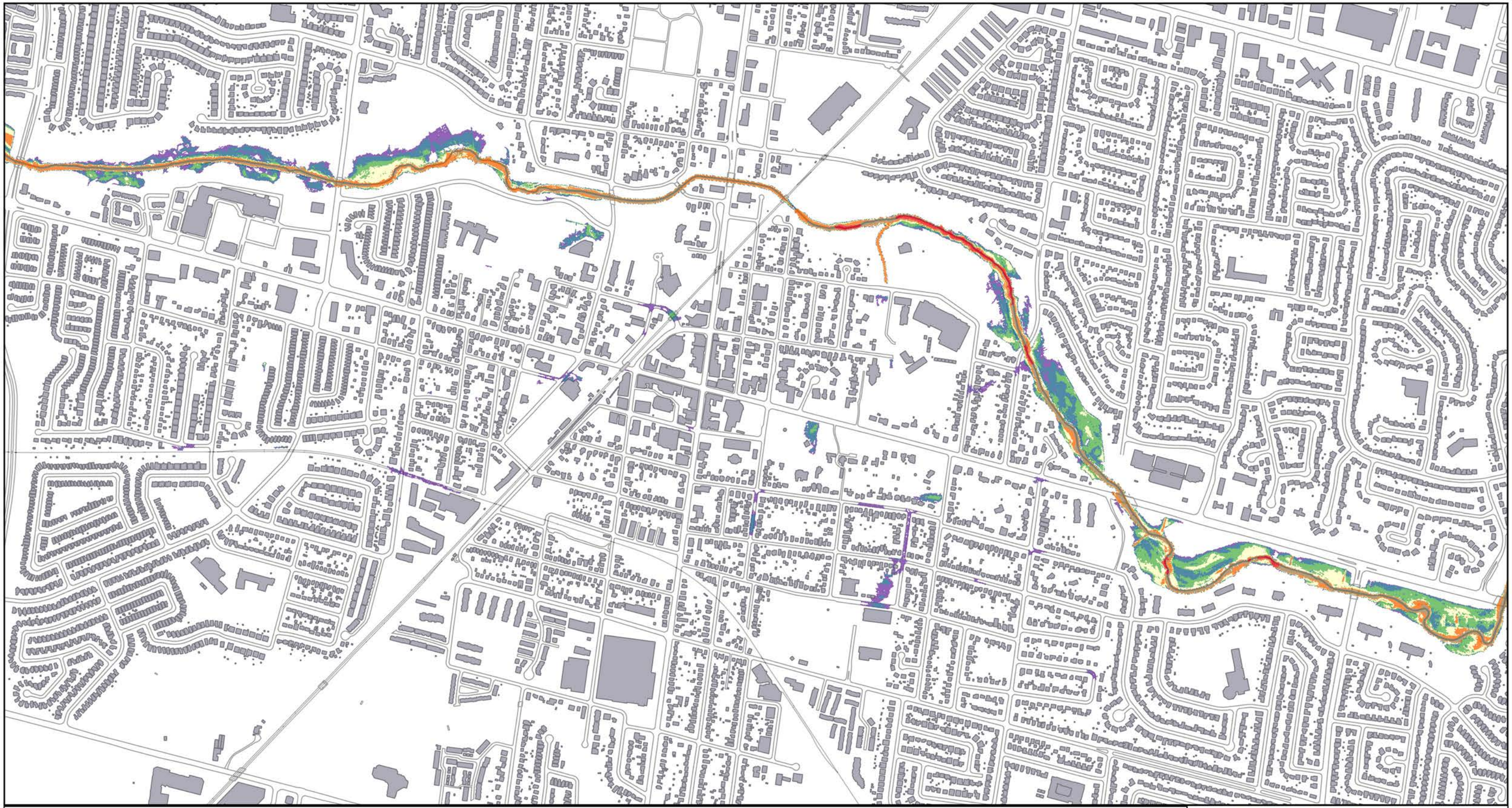
Project #22062

25 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 7.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 21, 2017
Figure Date: August 22, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

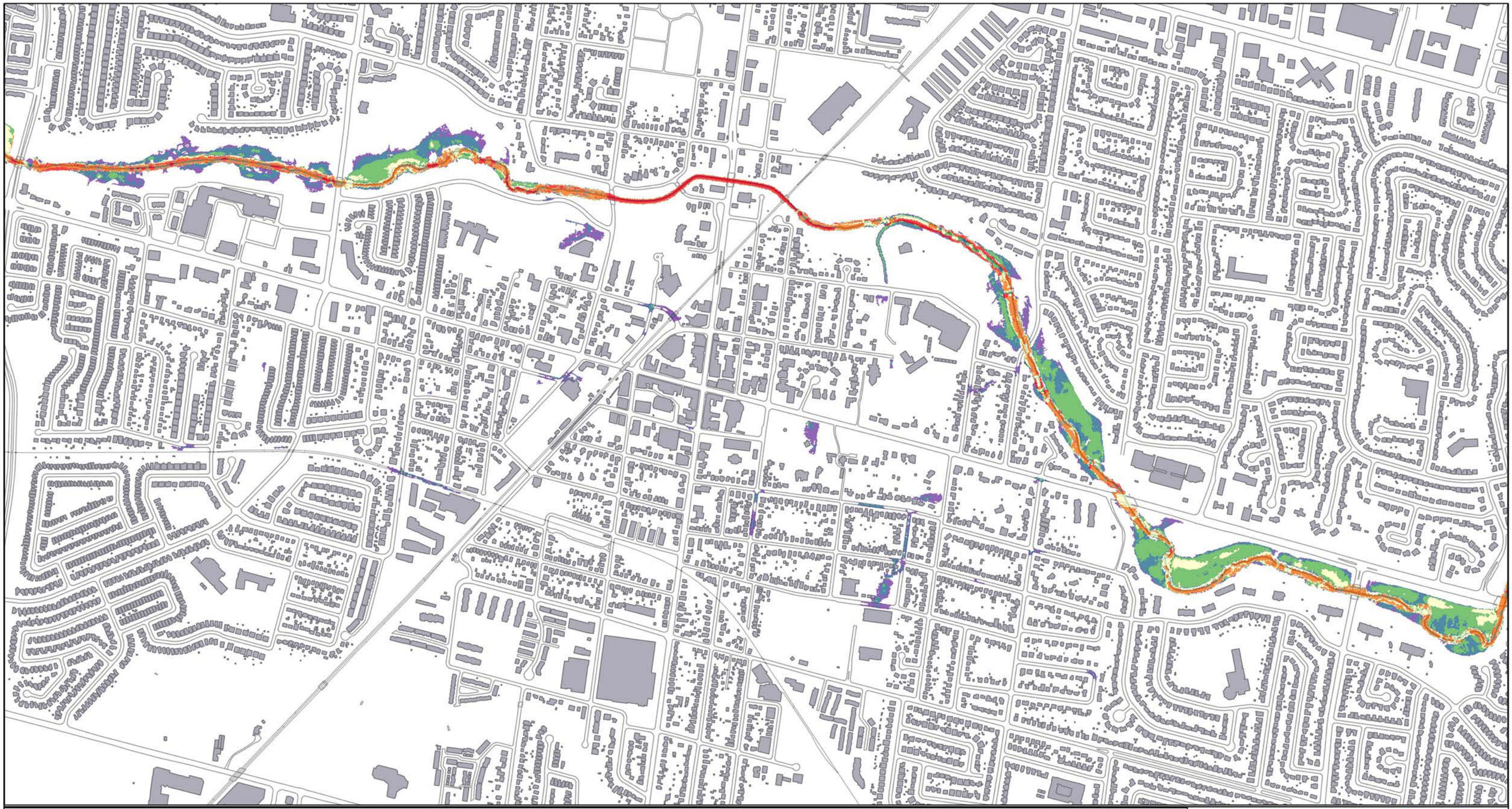
Project #22062

10 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 8.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 21, 2017
Figure Date: August 22, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

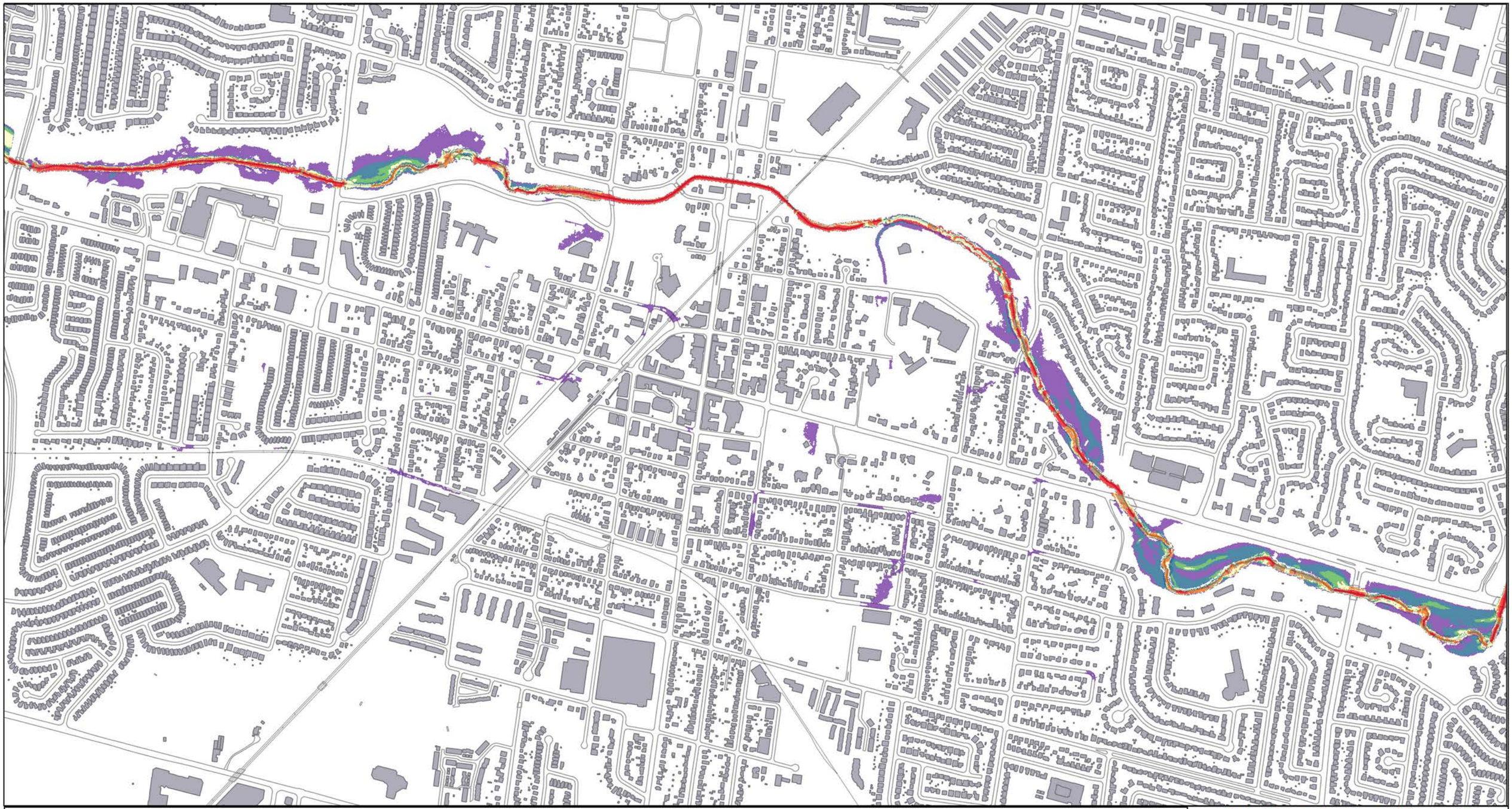
Project #22062

10 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 8.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 21, 2017
Figure Date: August 22, 2017

3-Way Model Results

Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

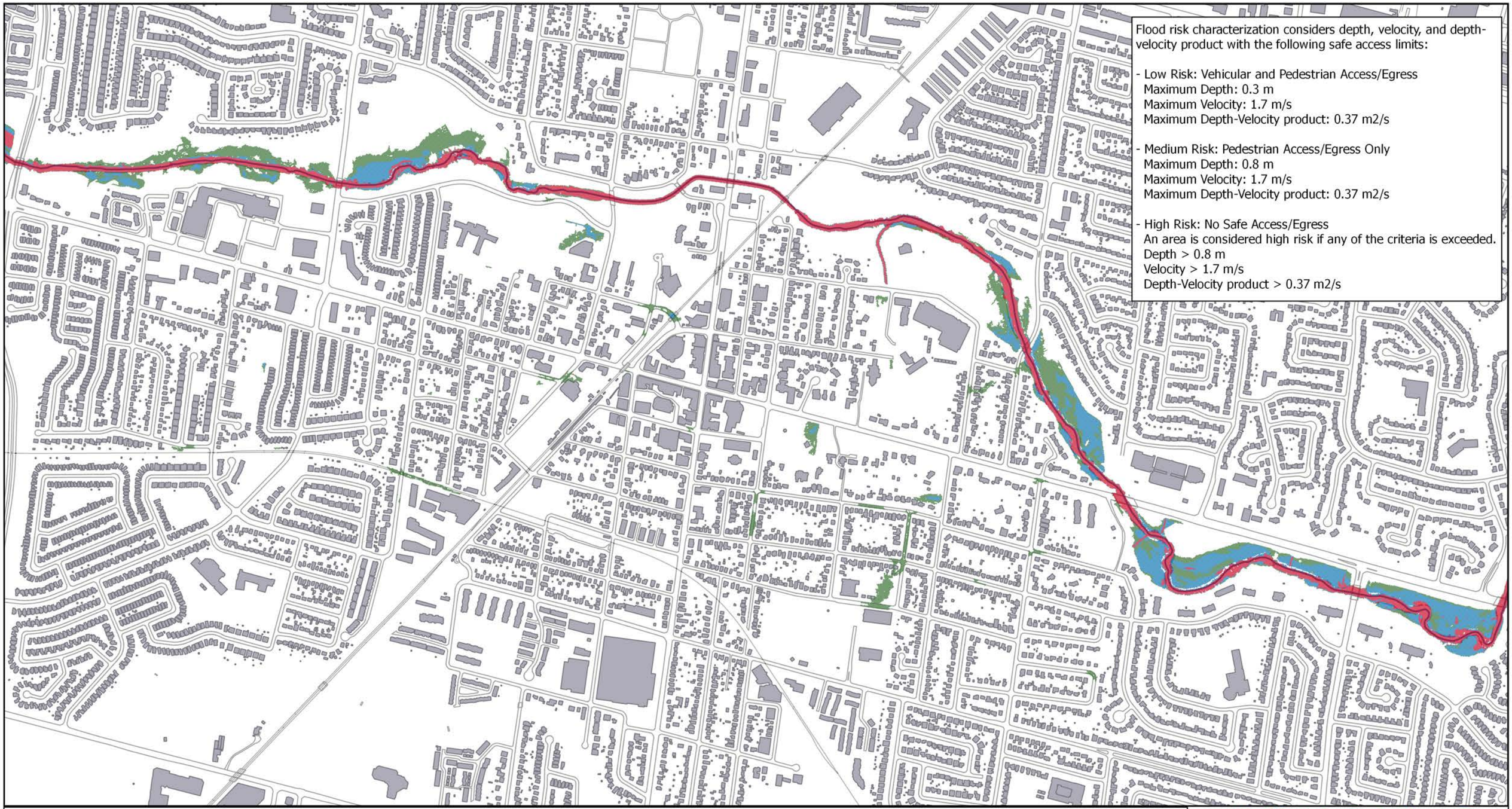
Project #22062

10 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 8.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: August 21, 2017
Figure Date: August 22, 2017

3-Way Model Results

Flood Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

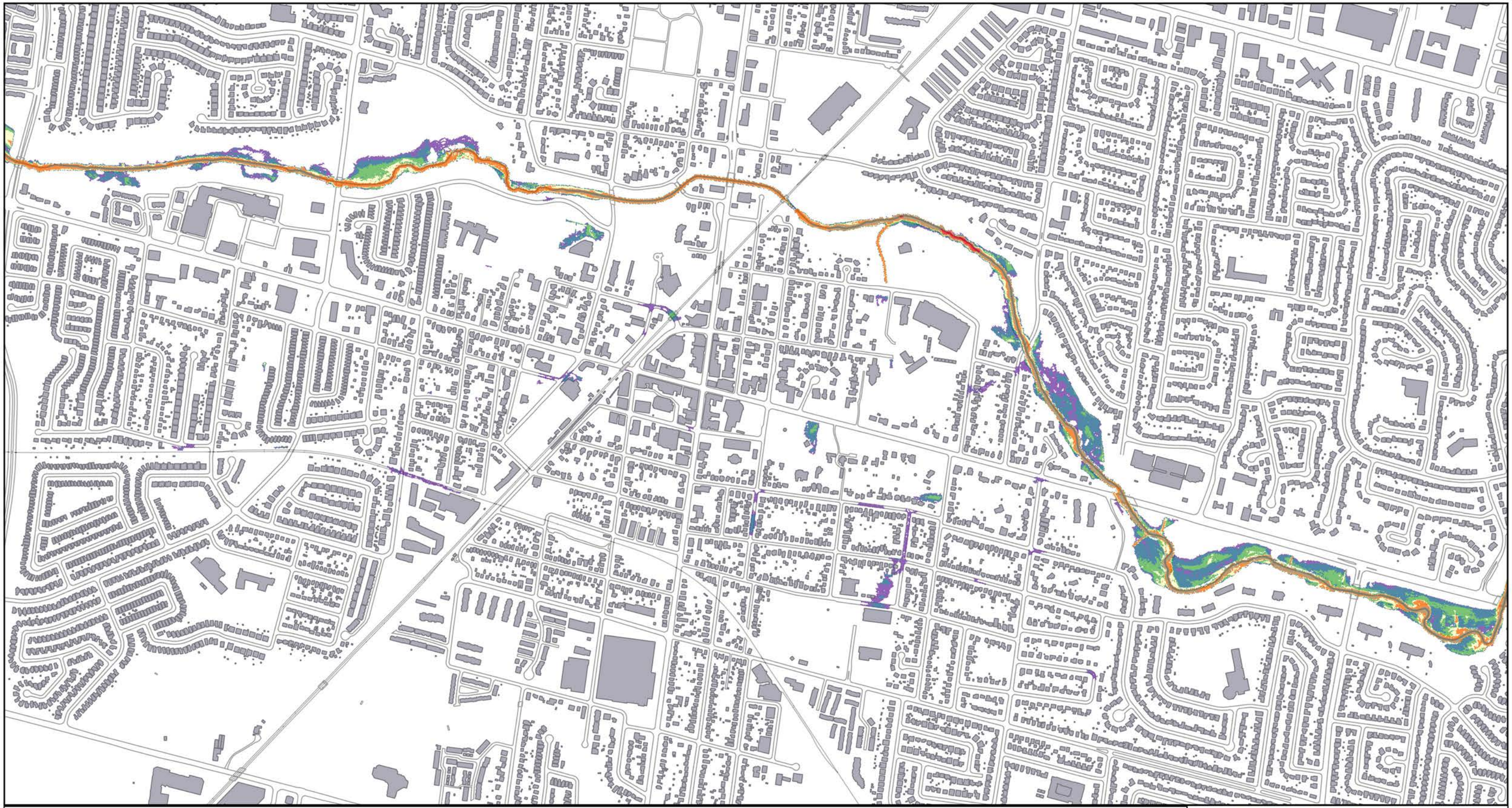
Project #22062

10 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 8.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

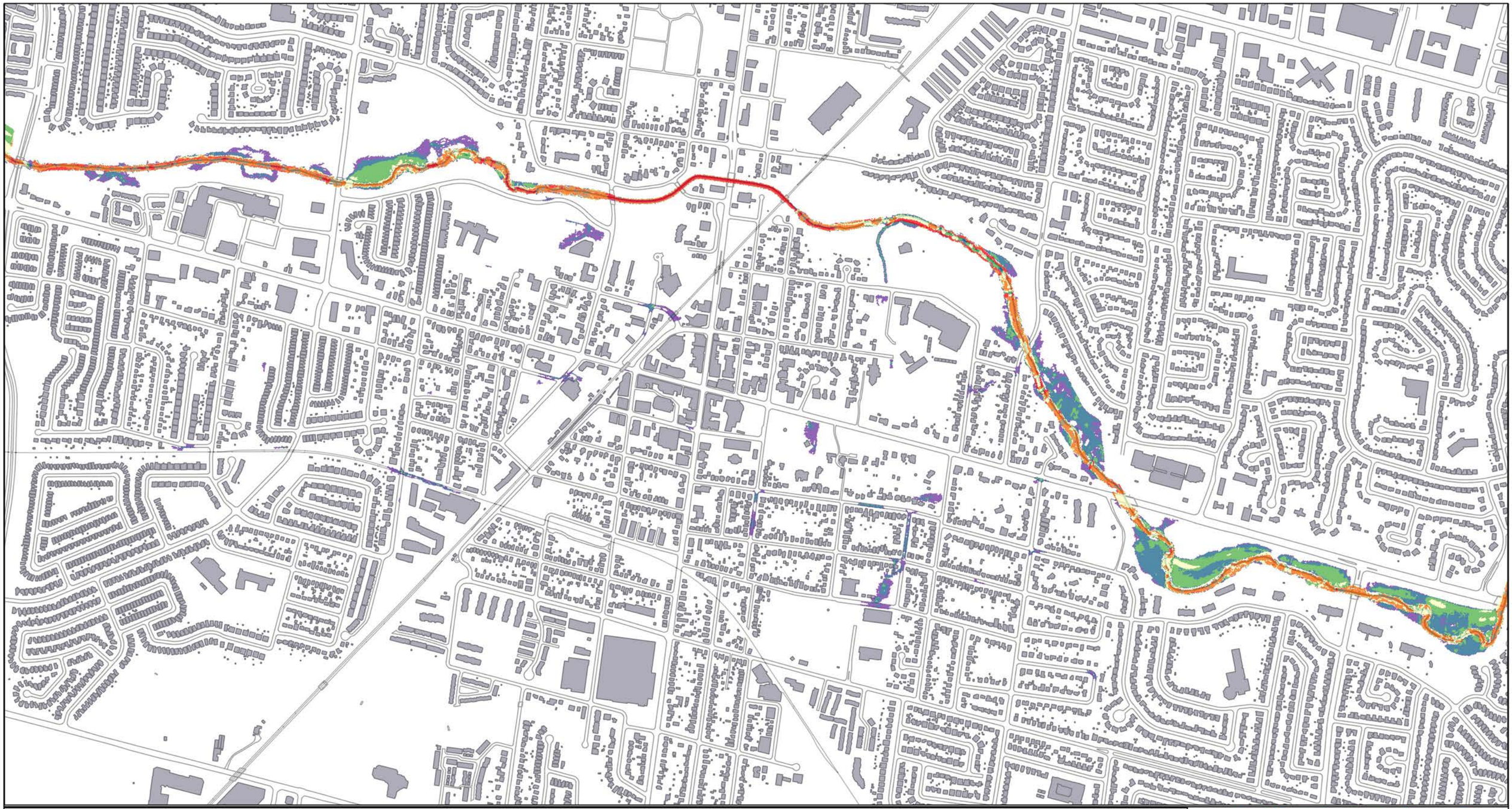
Project #22062

5 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 9.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

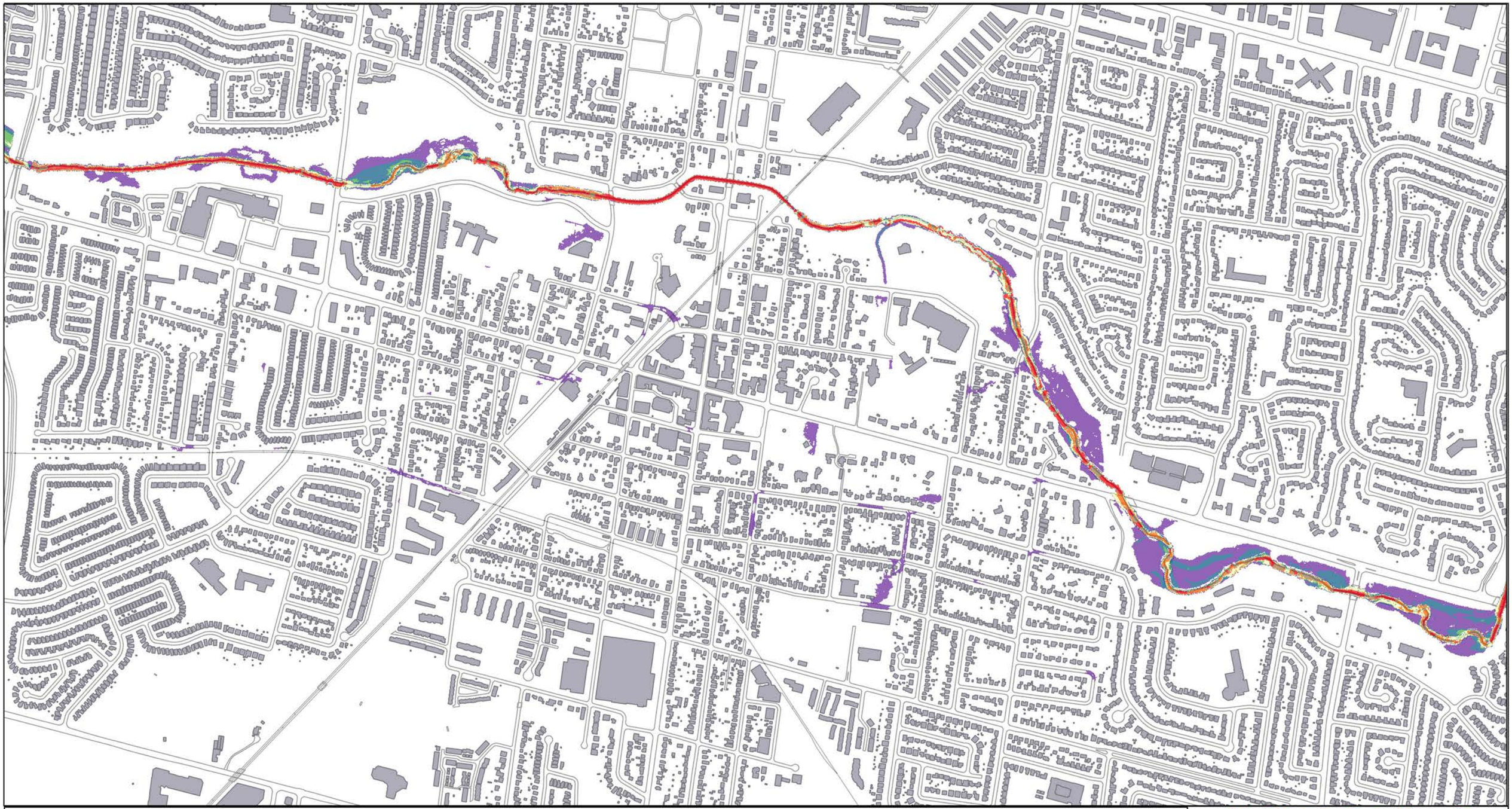
Project #22062

5 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 9.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: July 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

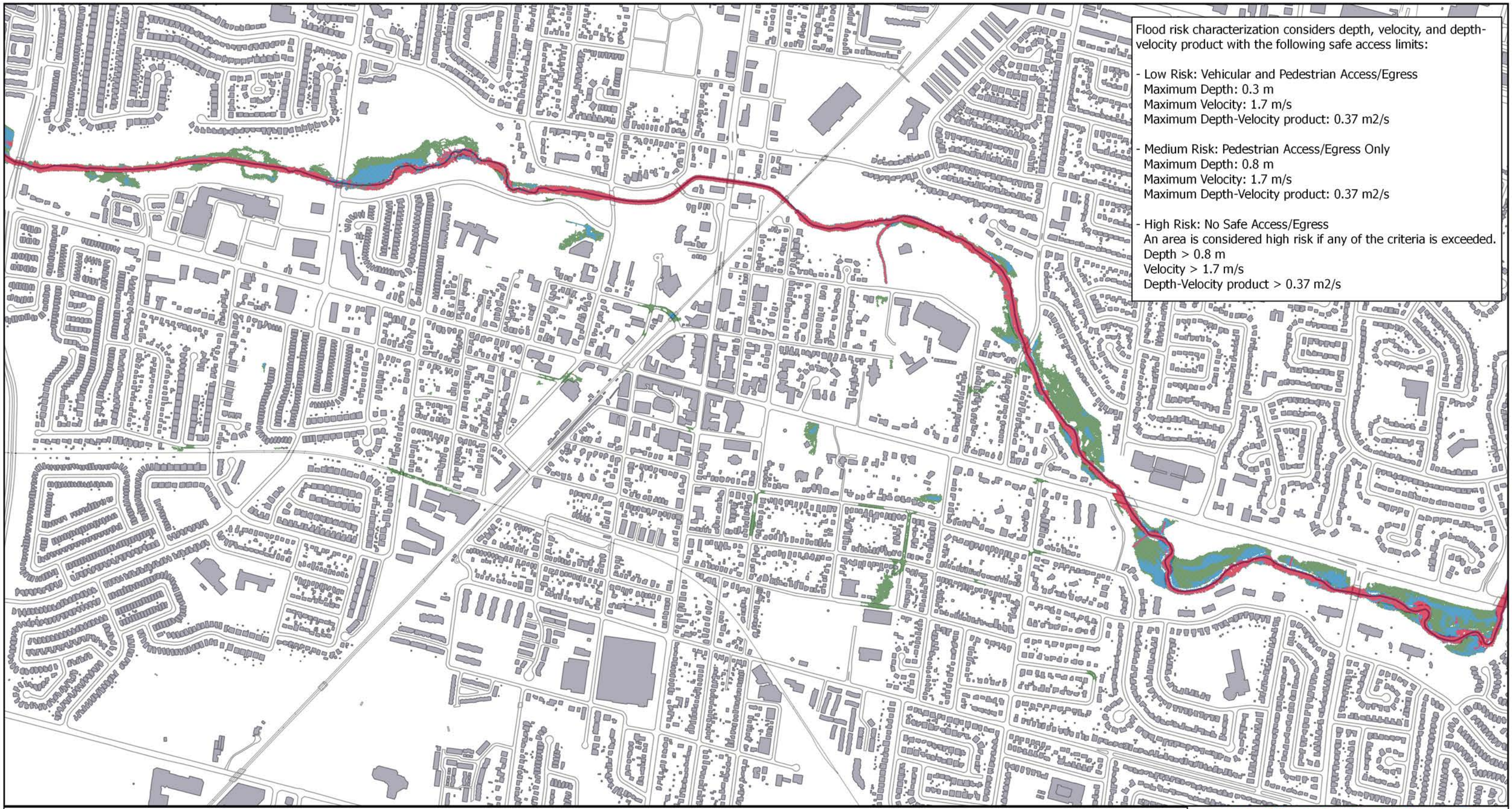
Project #22062

5 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 9.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
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  Maximum Depth-Velocity product: 0.37 m2/s

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  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: July 15, 2017
Figure Date: August 17, 201

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

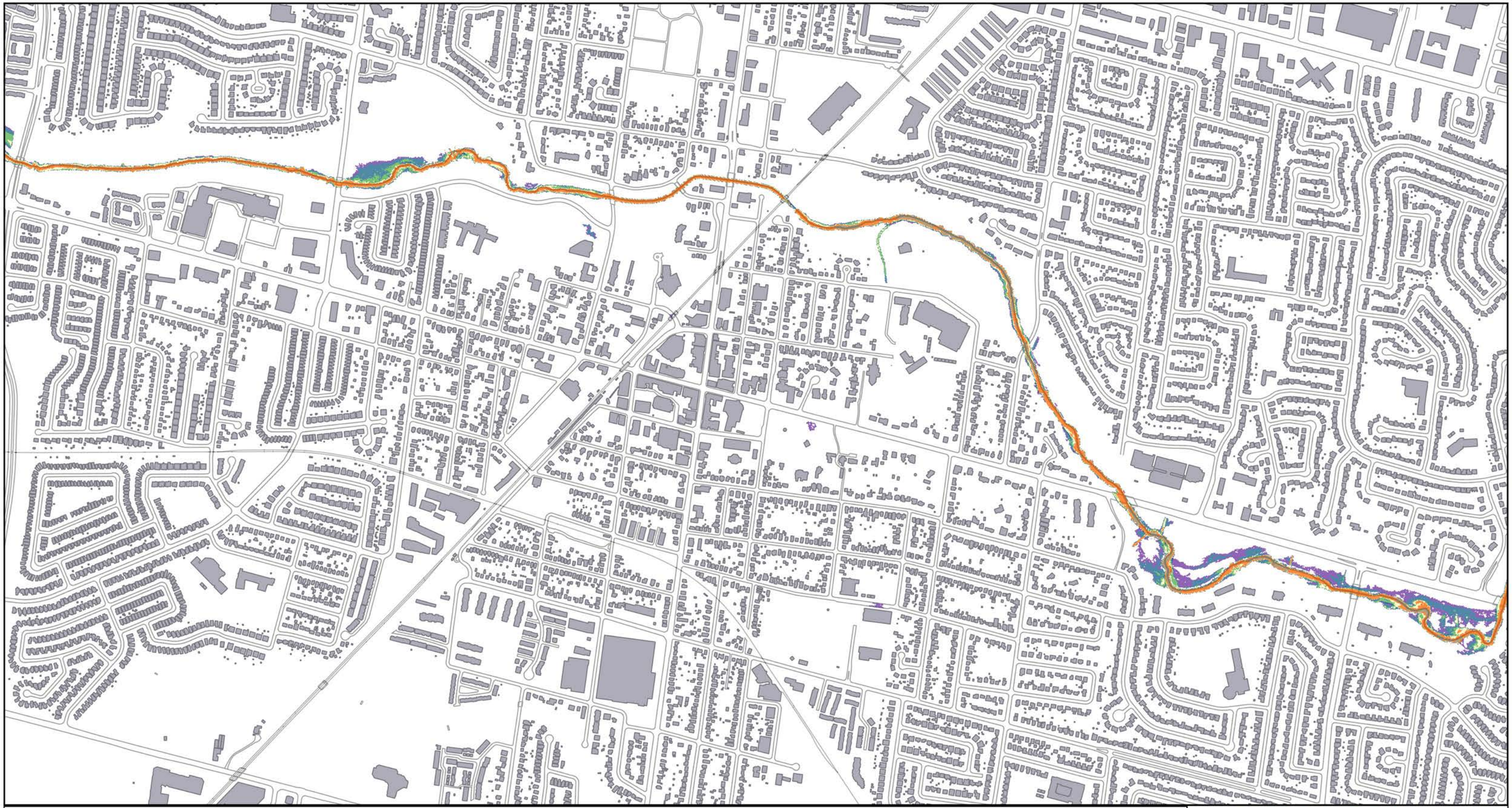
Project #22062

5 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 9.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 6, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

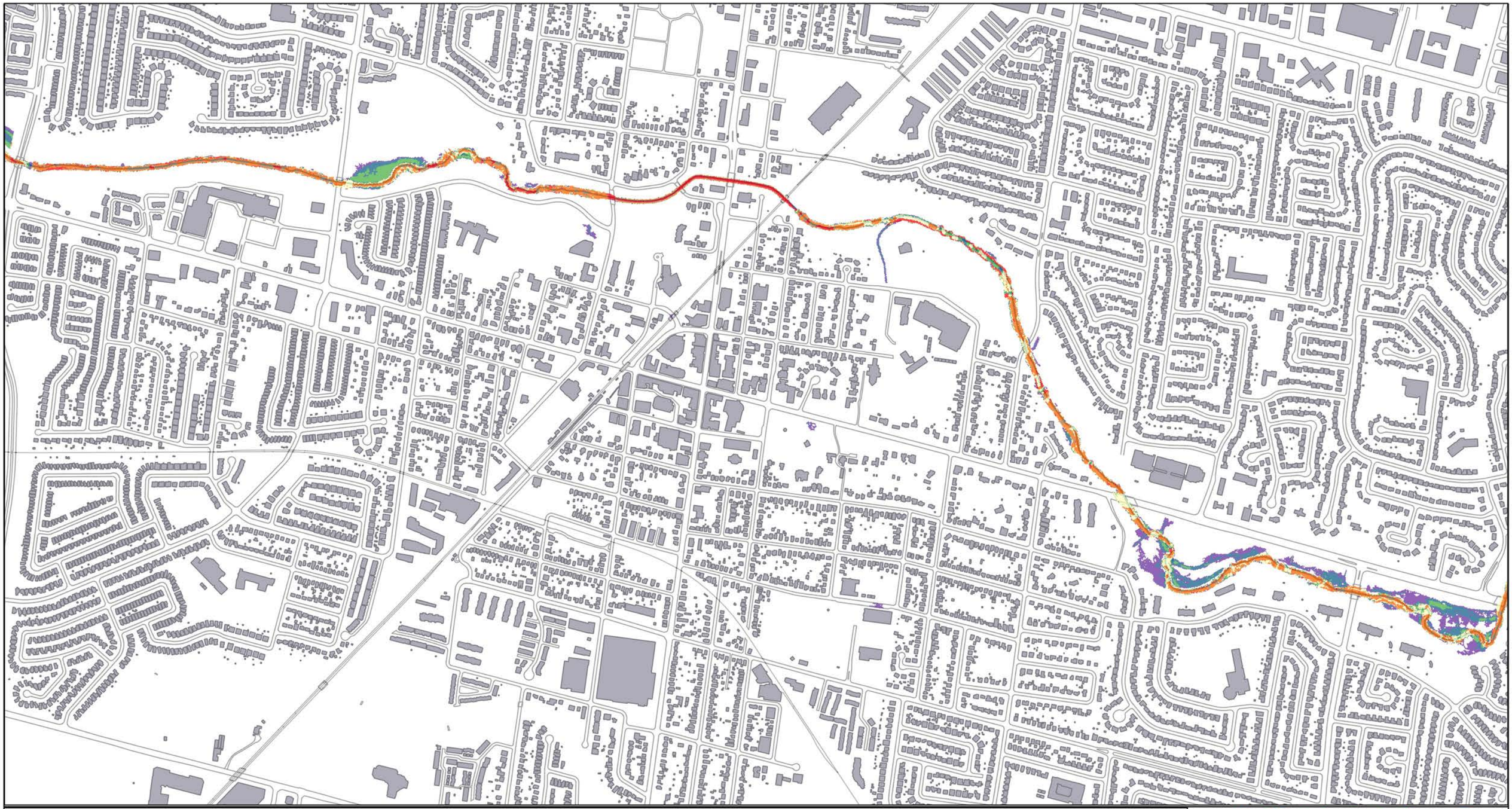
Project #22062

2 Year Storm - Unsteady State
Depth

K. Molnar
K. Hofbauer

Map 10.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 6, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

Matrix Solutions Inc.
ENVIRONMENT & ENGINEERING

Brampton Integrated Flood Study
MIKE FLOOD Results

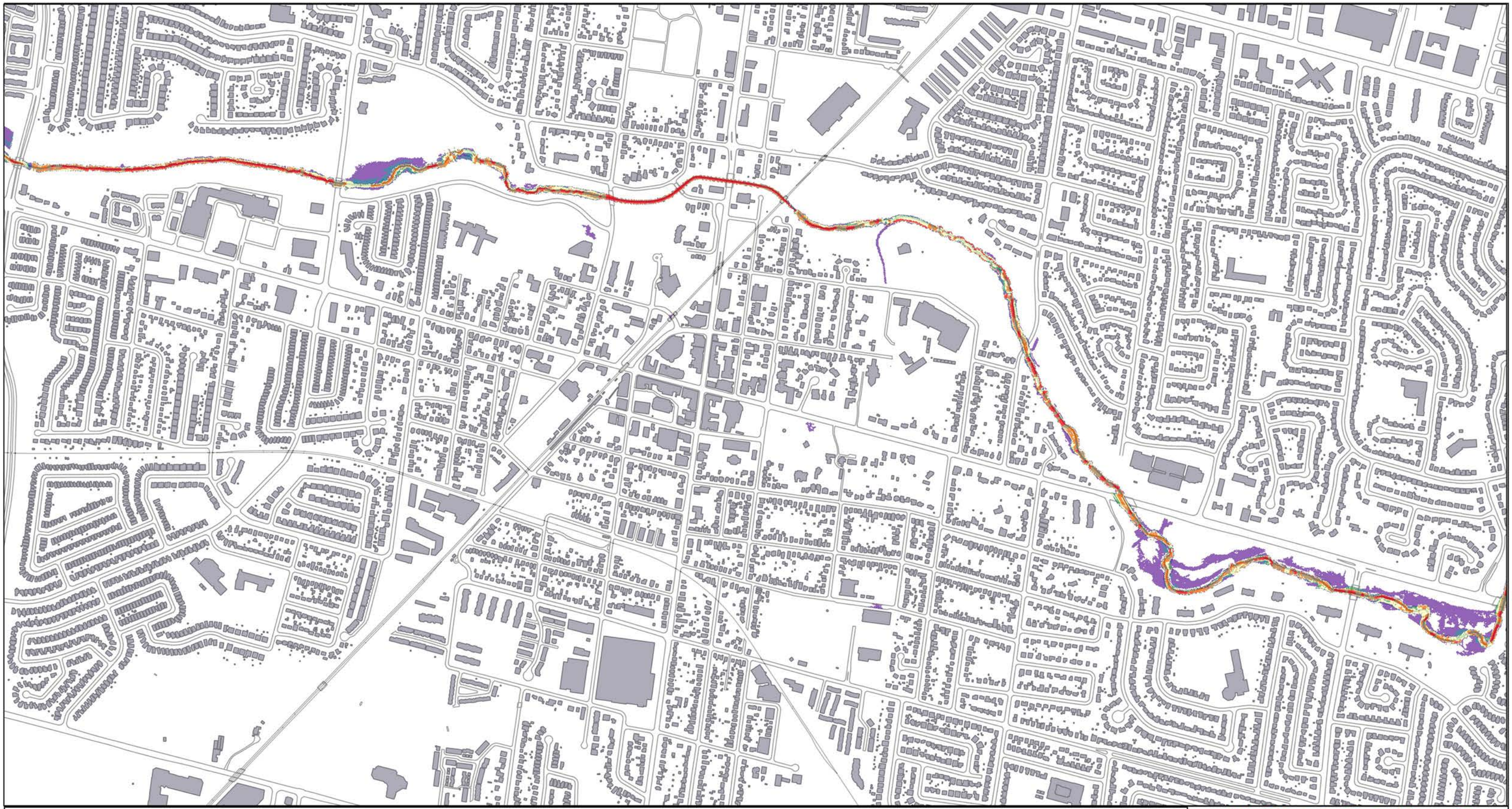
Project #22062

2 Year Storm - Unsteady State
Velocity

K. Molnar
K. Hofbauer

Map 10.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 6, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

Matrix Solutions Inc.
ENVIRONMENT & ENGINEERING

Brampton Integrated Flood Study
MIKE FLOOD Results

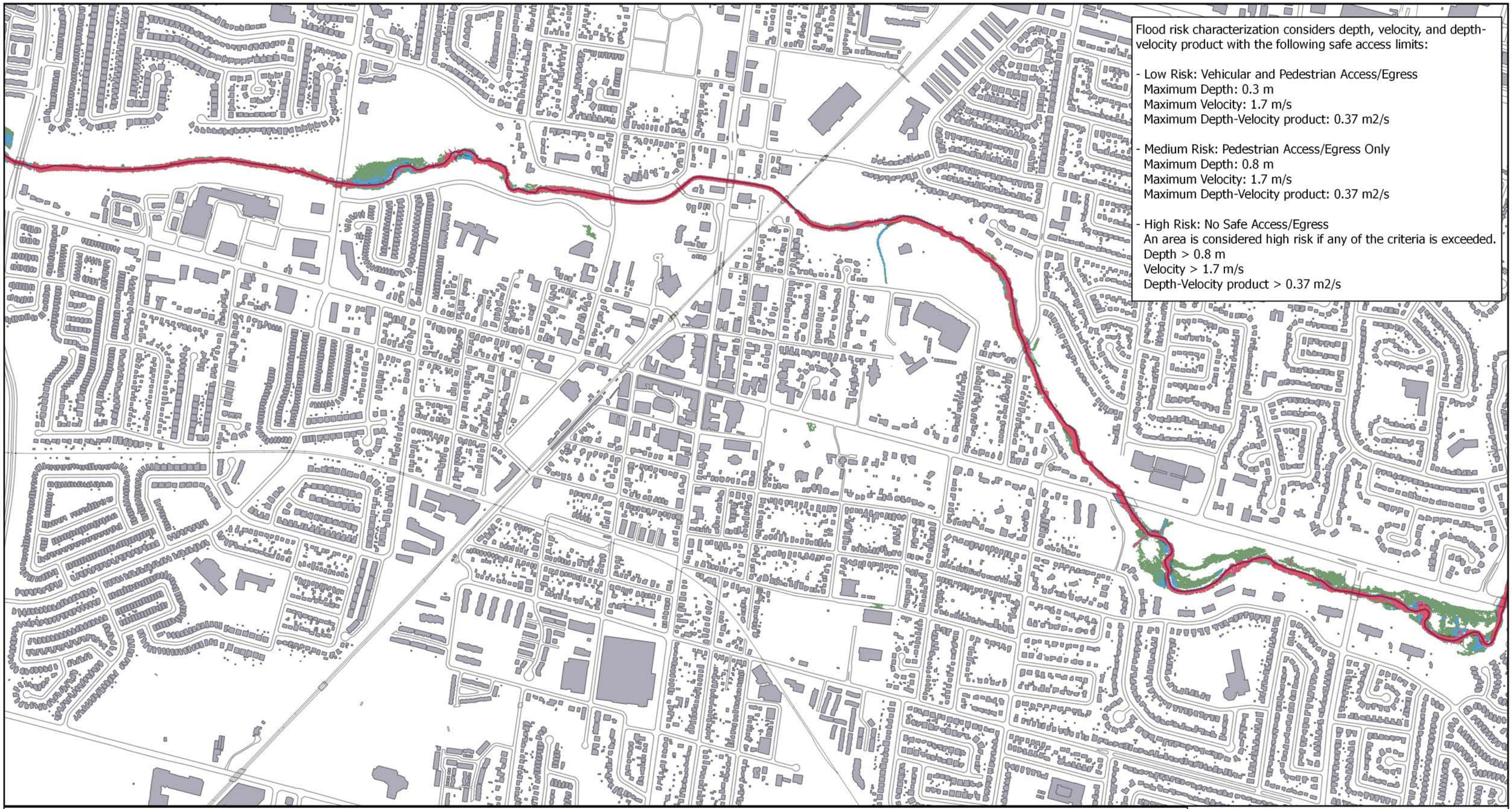
Project #22062

2 Year Storm - Unsteady State
Depth x Velocity

K. Molnar
K. Hofbauer

Map 10.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

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  Maximum Depth-Velocity product: 0.37 m2/s

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  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: August 6, 2017
Figure Date: August 8, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

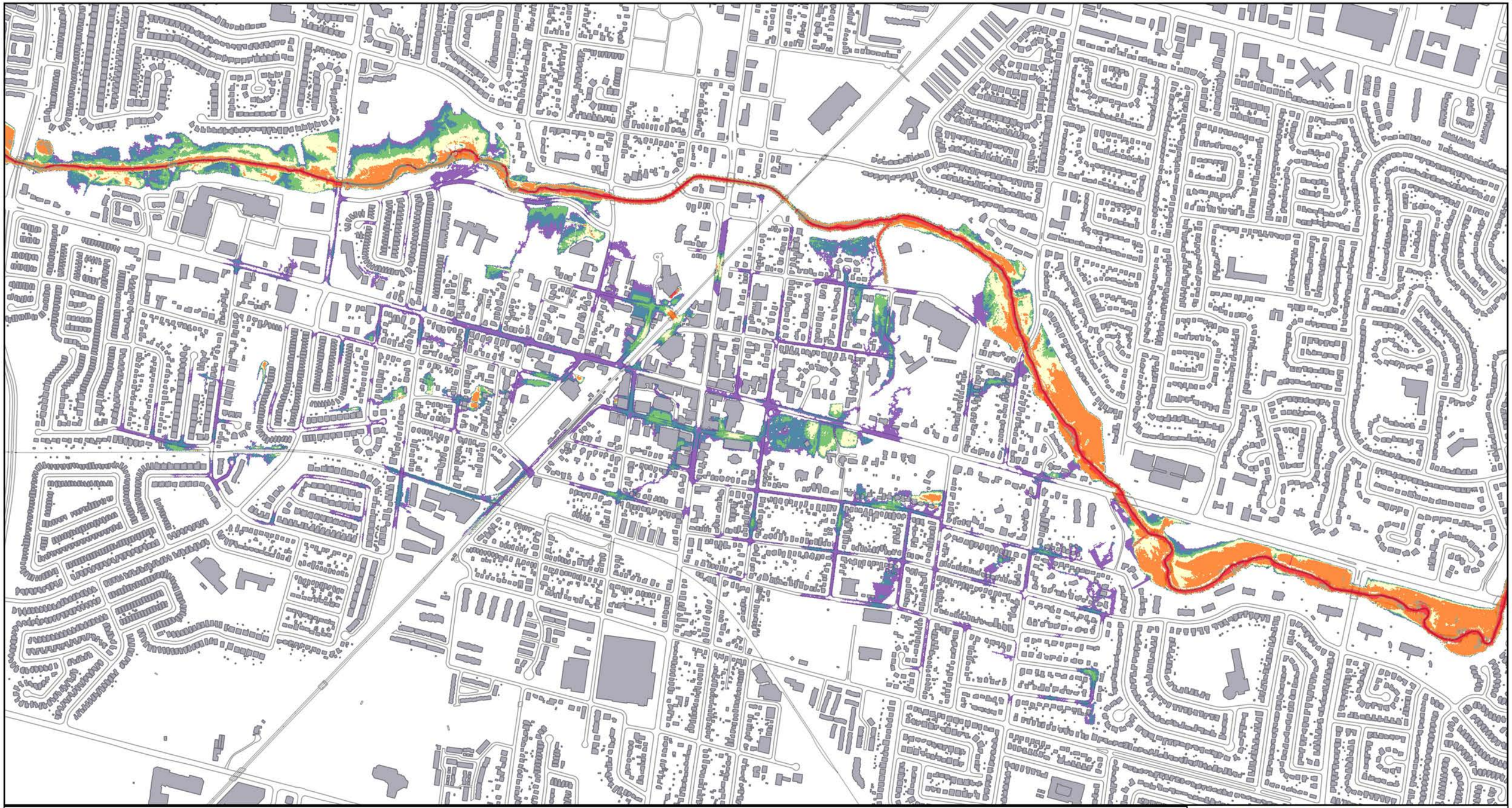
Project #22062

2 Year Storm - Unsteady State
Flood Risk

K. Molnar
K. Hofbauer

Map 10.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

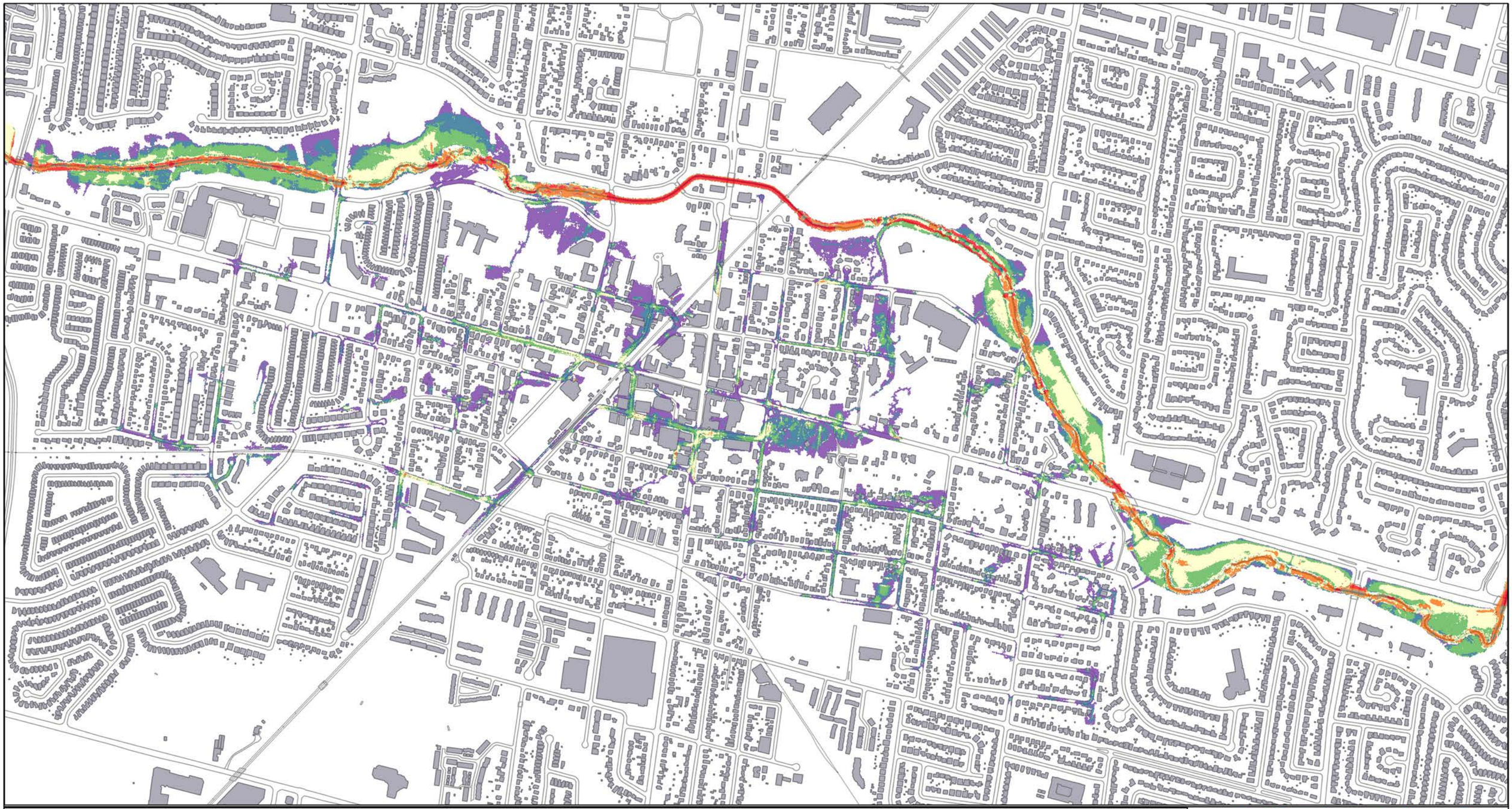
Project #22062

Urban: 100 year Chicago, River: 100 year AES Depth

K. Molnar
K. Hofbauer

Map 11.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

Project #22062

Urban: 100 year Chicago, River: 100 year AES Velocity

K. Molnar
K. Hofbauer

Map 11.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs

Run Date: August 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

Project #22062

Urban: 100 year Chicago, River: 100 year AES
Depth x Velocity

K. Molnar
K. Hofbauer

Map 11.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs

Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
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  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: August 15, 2017
Figure Date: August 17, 2017

3-Way Model Results

Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

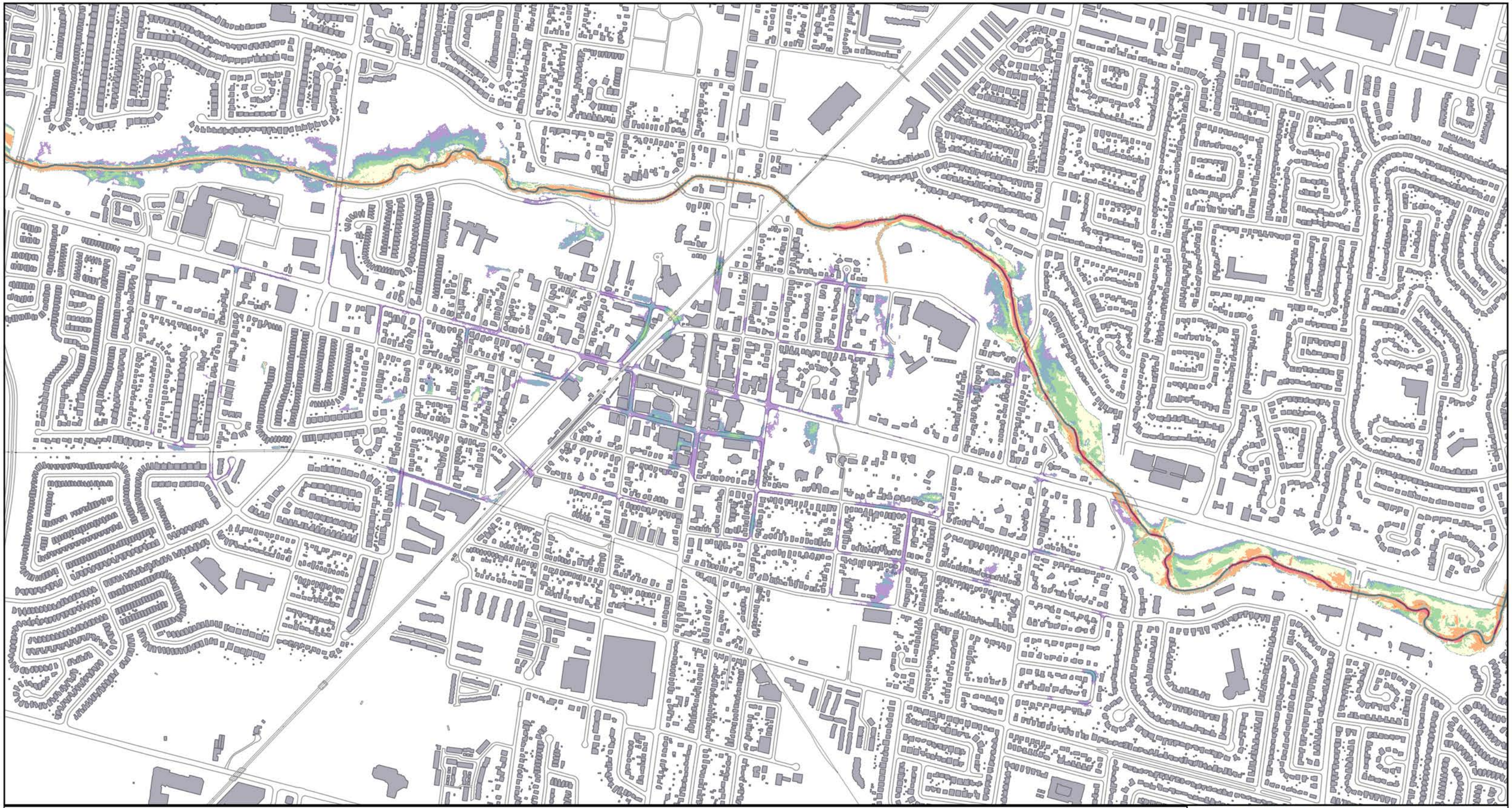
Project #22062

Urban: 100 year Chicago, River: 100 year AES
Flood Risk

K. Molnar
K. Hofbauer

Map 11.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 16, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

Matrix Solutions Inc.
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Brampton Integrated Flood Study
MIKE FLOOD Results

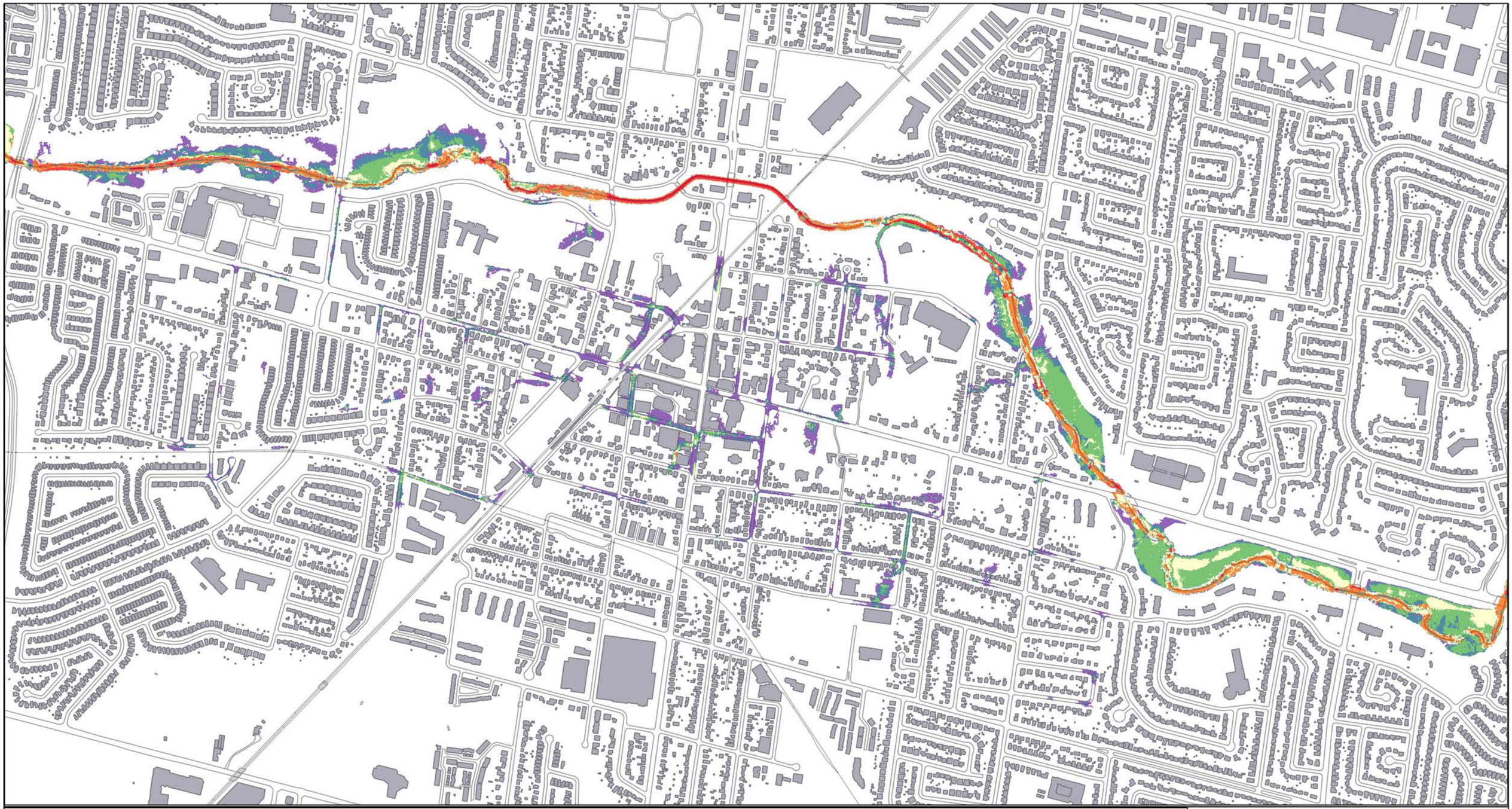
Project #22062

Urban: 10 year Chicago, River: 10 year AES Depth

K. Molnar
K. Hofbauer

Map 12.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 16, 2017
Figure Date: August 17, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

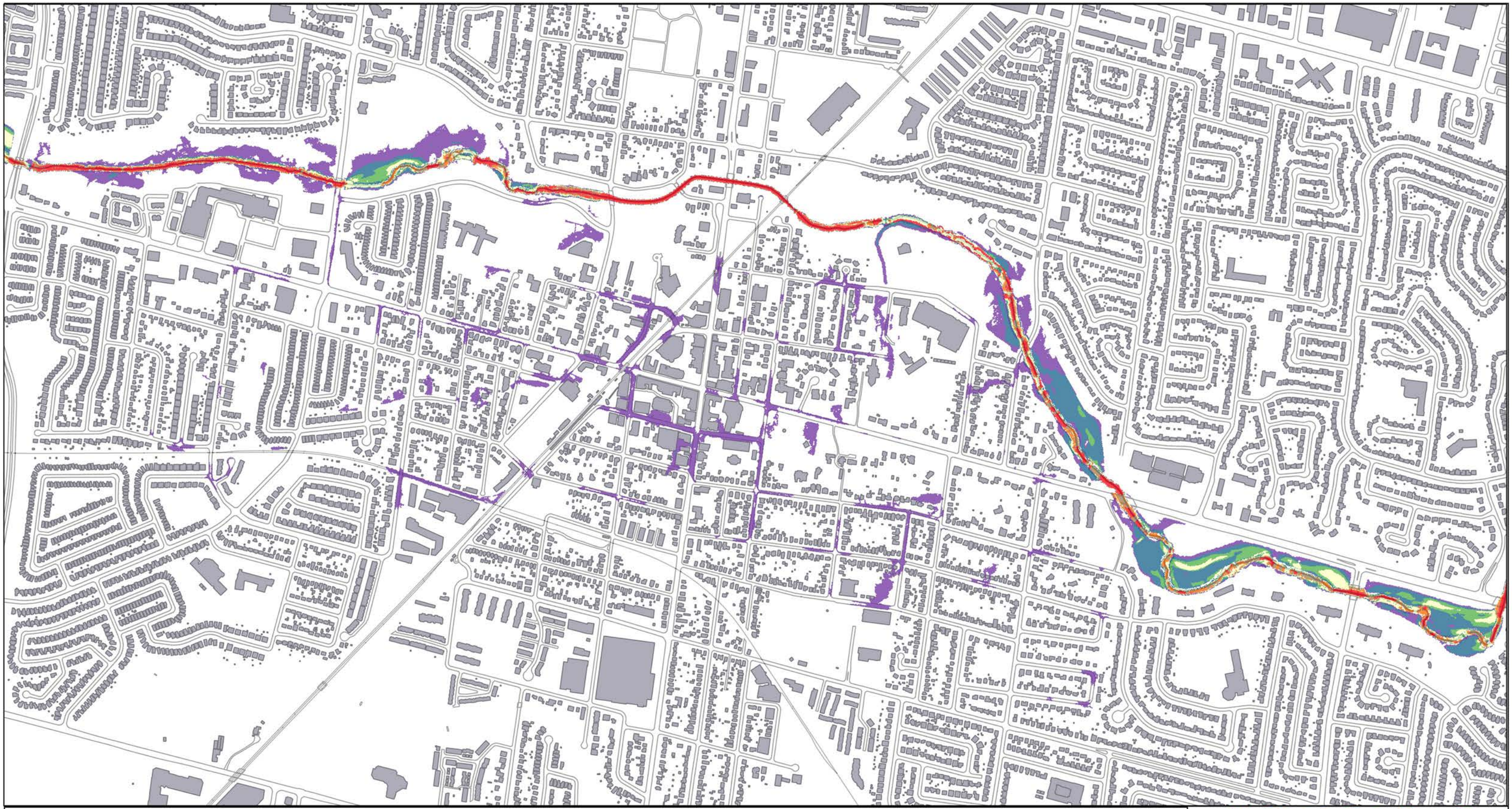
Project #22062

Urban: 10 year Chicago, River: 10 year AES
Velocity

K. Molnar
K. Hofbauer

Map 12.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 16, 2017
Figure Date: August 17, 2017

3-Way Model Results

Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

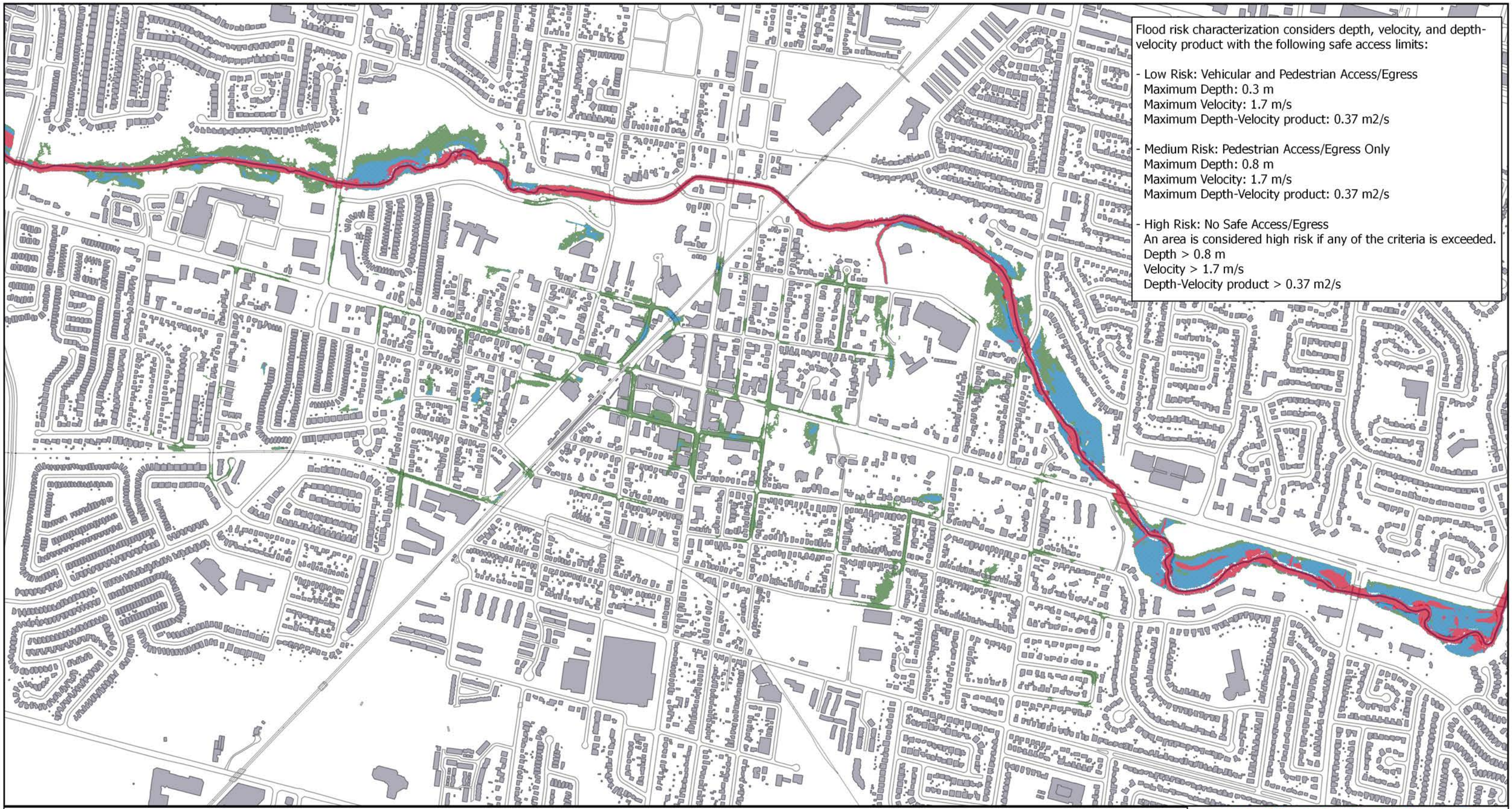
Project #22062

Urban: 10 year Chicago, River: 10 year AES
Depth x Velocity

K. Molnar
K. Hofbauer

Map 12.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress
  Maximum Depth: 0.3 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: August 16, 2017
Figure Date: August 17, 2017

3-Way Model Results

Flood Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

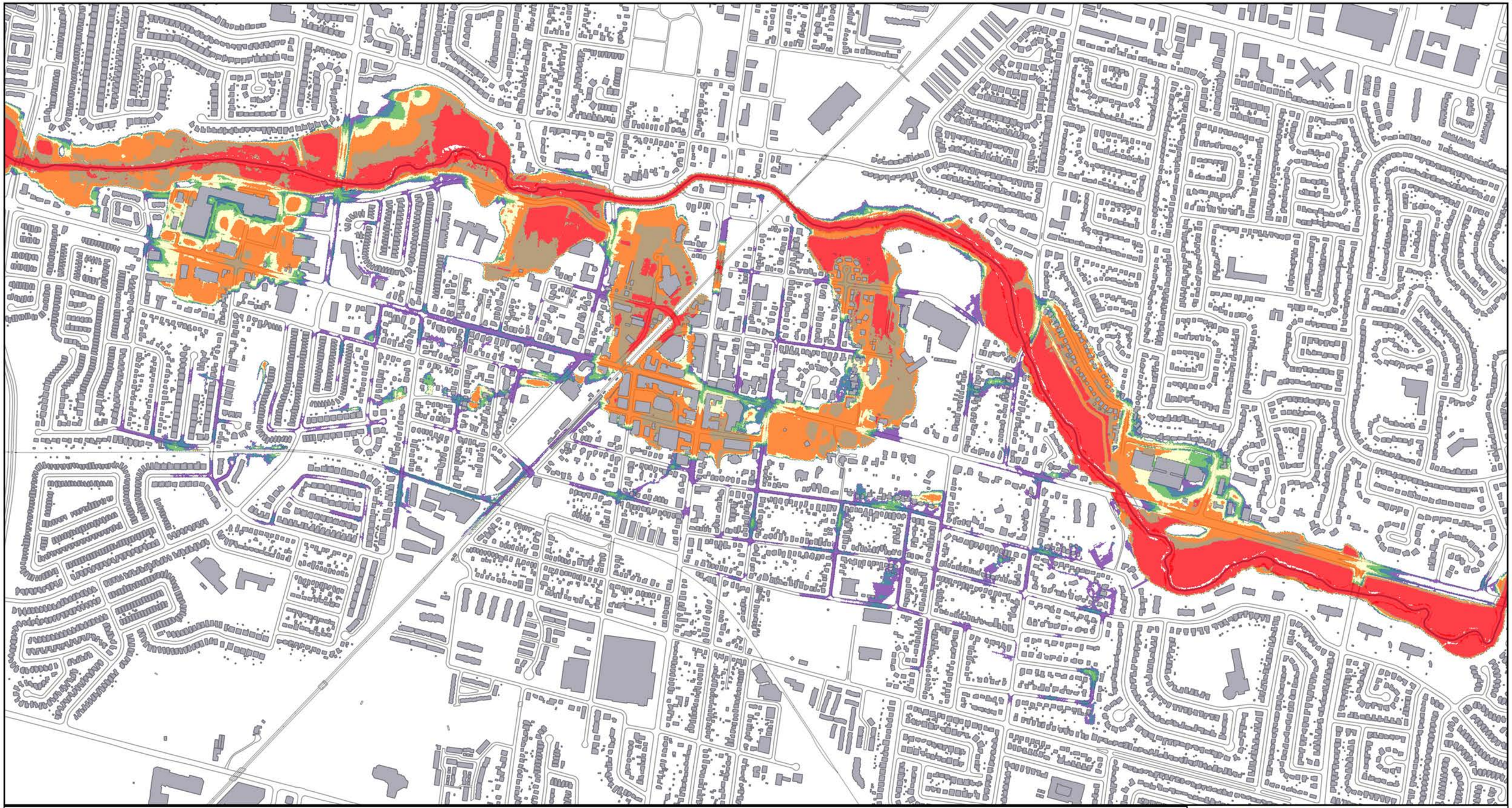
Project #22062

Urban: 10 year Chicago, River: 10 year AES
Flood Risk

K. Molnar
K. Hofbauer

Map 12.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 20, 2017
Figure Date: August 22, 2017

3-Way Model Results

Maximum Depth (m)

- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

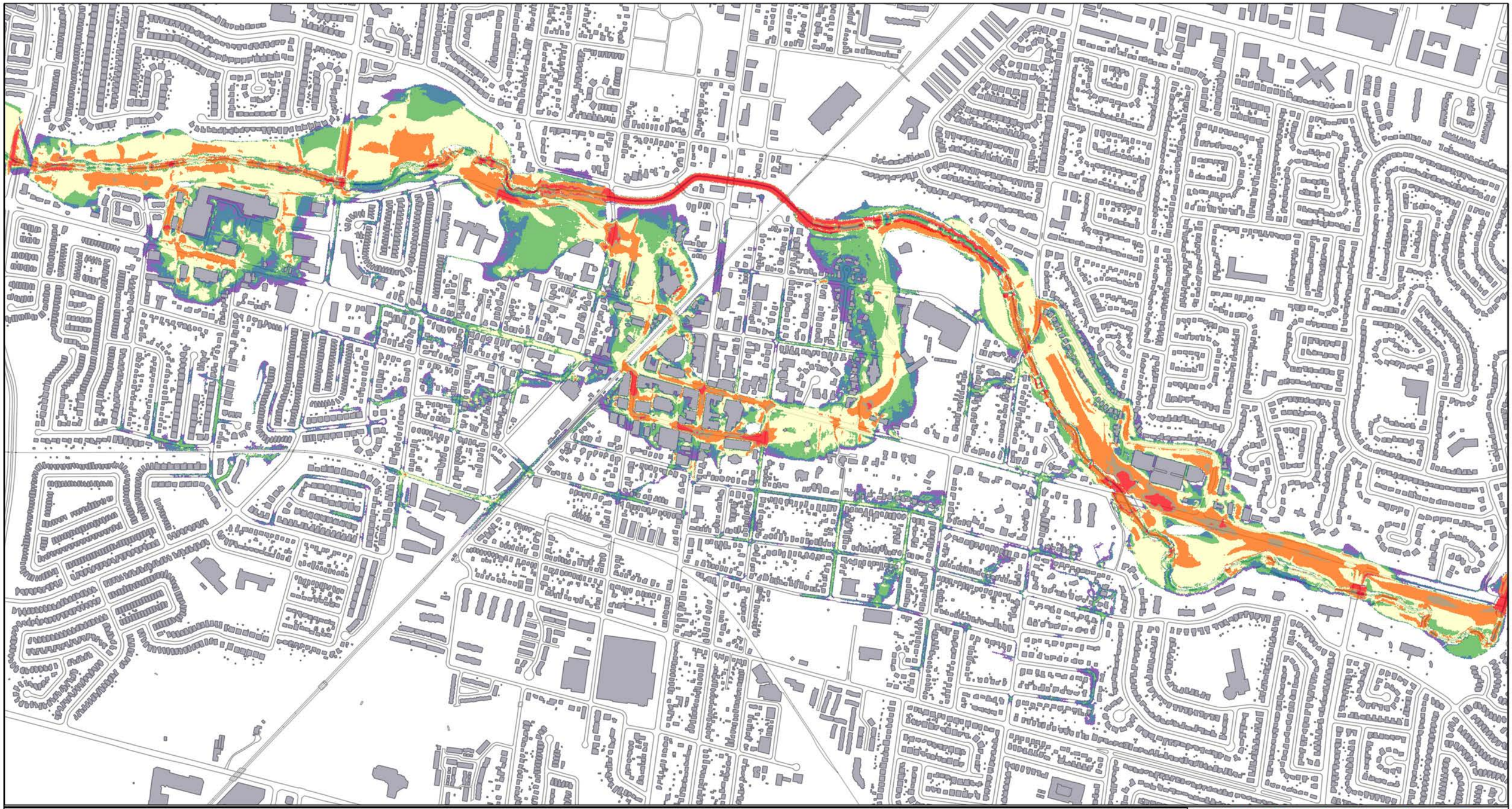
Project #22062

Urban: 100year Chicago, River: Regional Storm Depth

K. Molnar
K. Hofbauer

Map 13.1

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 20, 2017
Figure Date: August 22, 2017

3-Way Model Results

Maximum Velocity (m/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

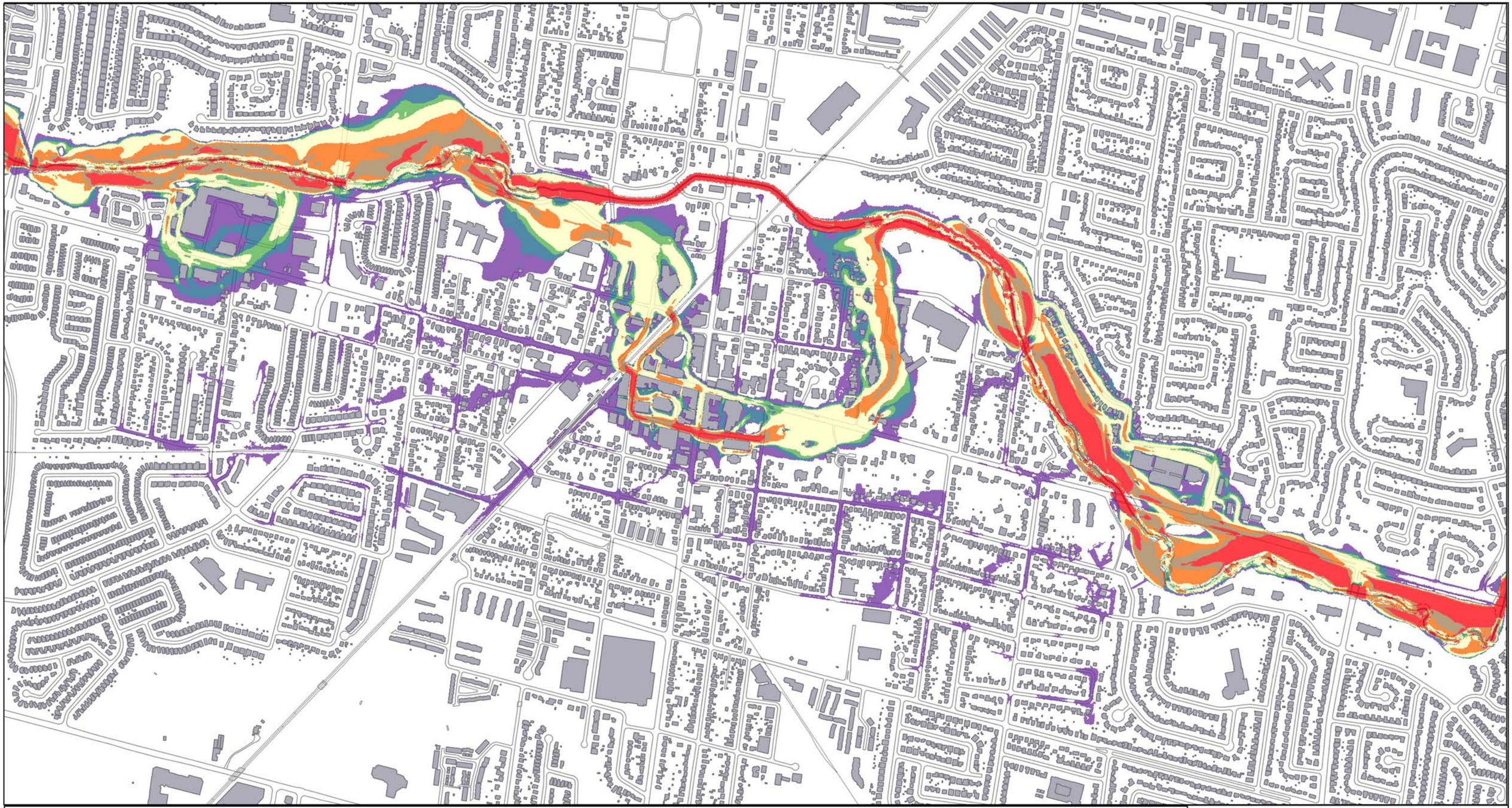
Project #22062

Urban: 100year Chicago, River: Regional Storm Velocity

K. Molnar
K. Hofbauer

Map 13.2

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



Run Date: August 20, 2017
Figure Date: August 22, 2017

3-Way Model Results

Results

Maximum Depth x Velocity (m2/s)

- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.370
- 0.37 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

N

0 250 500 750 1000 m

1:10,000

Matrix Solutions Inc.
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Brampton Integrated Flood Study
MIKE FLOOD Results

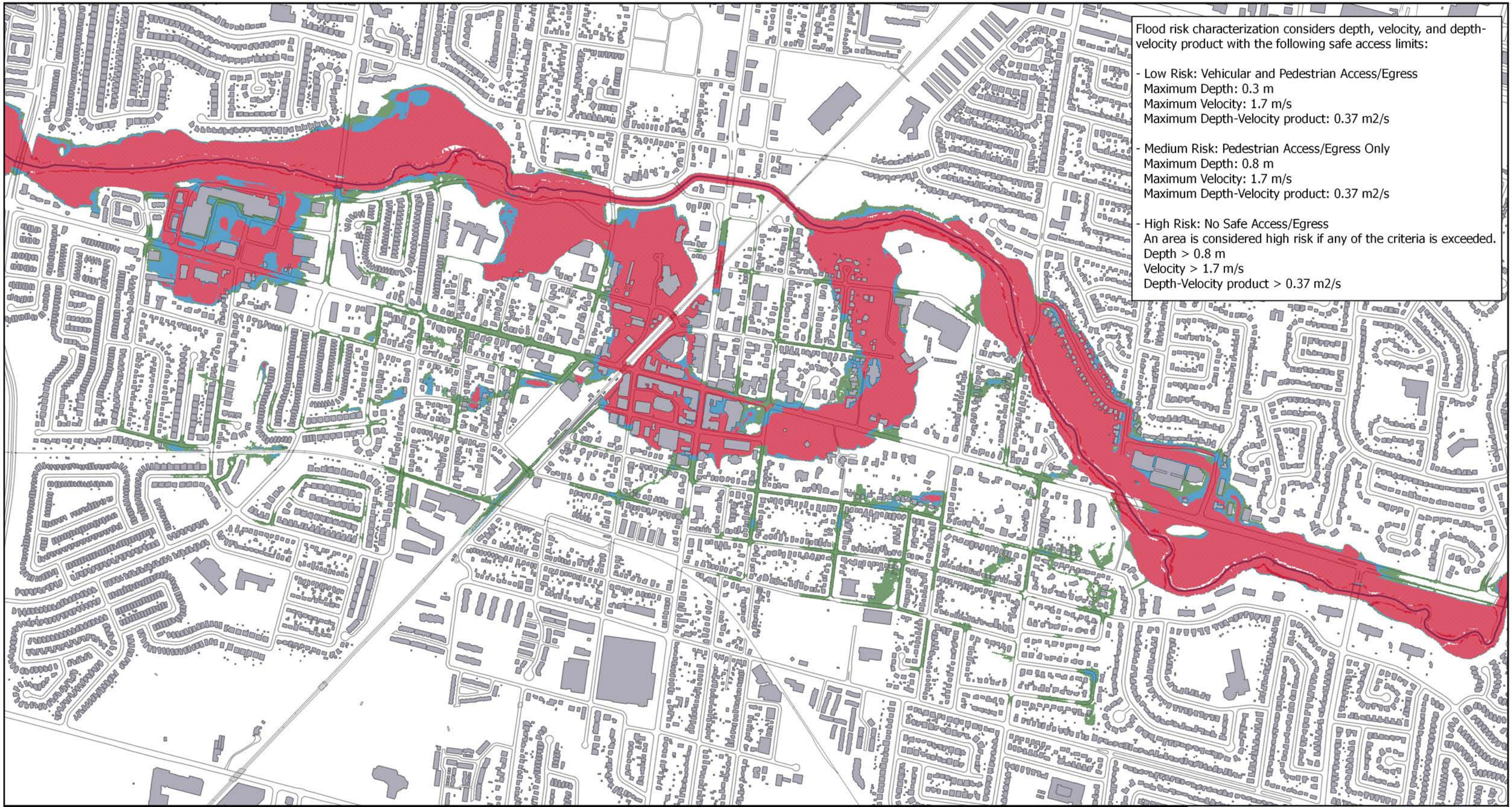
Project #22062

Urban: 100year Chicago, River: Regional Storm
Depth x Velocity

K. Molnar
K. Hofbauer

Map 13.3

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs



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  Maximum Depth-Velocity product: 0.37 m2/s

- Medium Risk: Pedestrian Access/Egress Only
  Maximum Depth: 0.8 m
  Maximum Velocity: 1.7 m/s
  Maximum Depth-Velocity product: 0.37 m2/s

- High Risk: No Safe Access/Egress
  An area is considered high risk if any of the criteria is exceeded.
  Depth > 0.8 m
  Velocity > 1.7 m/s
  Depth-Velocity product > 0.37 m2/s

Run Date: August 20, 2017
Figure Date: August 22, 2017

3-Way Model Results

Flood Risk

- Low (Vehicular and Pedestrian Access/Egress)
- Medium (Pedestrian Access/Egress Only)
- High (No Safe Access/Egress)

N

0 250 500 750 1000 m

1:10,000

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Brampton Integrated Flood Study
MIKE FLOOD Results

Project #22062

Urban: 100year Chicago, River: Regional Storm Flood Risk

K. Molnar
K. Hofbauer

Map 13.4

N:\PROJECTS\22062 - City of Brampton Flood Study\GIS\Brampton Model Results.qgs